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CITY OF

NIAGARA FALLS

URBAN RENEWAL STUDY

A Report Submitted To

THE COUNCIL OF THE CITY OF NIAGARA FALLS

By

GEORGES POTVIN

NIAGARA FALLS, ONTARIO

1965

JUN 15 1956
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His Worship Mayor R. F. Keighan
and Members of the City Council,
City Hall,
Niagara Falls,
Ontario.

I hereby submit the accompanying report which summarizes the findings of the Urban Renewal Study that was carried out in the Niagara Falls area under agreement between the City of Niagara Falls and the professional firm of Georges Potvin and Associates.

The Urban Renewal Study was begun in July 1961 and covered the municipal territories of the former City of Niagara Falls, the former Township of Stamford and the Village of Chippawa. It was while our study was in progress that a new municipal unit—the present City of Niagara Falls—was created through the amalgamation of the former City and the Township of Stamford. All the field surveys and much of the statistical research were completed in 1961; the remaining necessary data were gathered in 1962.

I wish to apologize very sincerely for the fact that a host of adverse personal circumstances have caused such a delay in the completion of the present report.

You will note that, for the reason mentioned above, the presentation of much of the research data has been made on the basis of the former territorial units. This does not minimize, however, the value of the report or the validity of its conclusions and recommendations. Your community's urban renewal needs are obviously concentrated in the older districts of the urbanized area; both land use and building conditions are virtually the same at present in these districts as they were at the time of our survey. Indeed, from all points of view, there are marked differences in the urban characteristics of that portion of your present City which was once the Township of Stamford and of those sectors that constituted the former City. I consider it therefore an advantage that the former territorial division has been preserved in the presentation of some of the survey data. May I point out, furthermore, that wherever necessary or desirable, the information has been re-arranged to conform to the territory of the amalgamated City.

The purpose of the study was to effect a comprehensive survey of the physical and functional characteristics of your urban area with a view to assessing its qualities and weaknesses, to determining realistic conditions under which the existing assets may be preserved and remedial measures, where needed, may be applied and, finally, to outlining a program of renewal action.

This report recommends the initiation of a comprehensive renewal program and suggests certain priorities. The final decision in this matter rests with your Council. Once a renewal policy has been established – and the main objective of the Urban Renewal Study is to provide a broad orientation for such a policy – the logical next step would be to undertake the preparation of specific urban renewal schemes, for which substantial financial assistance is available from both federal and provincial government sources.

I wish to point out that the usefulness of the Urban Renewal Study was not limited to the preparation of the present report. The survey data and our analysis of such data were of direct value to your Planning Board in the formulation of your Official Plan and to the consultants who were charged with the task of preparing the community's Traffic Study.

In my own name and on behalf of all the persons who assisted me in the conduct of the Urban Renewal Study and the preparation of this report, I wish to express our deep gratitude to the members of the municipal councils, past and present, of the Niagara Falls area for their confidence, understanding and patience, to all the municipal officials who lent us generous assistance, to the members of the Advisory Committee and to those of the Urban Renewal Committee, to the technical staff of your Planning Board and, particularly to Messrs. C. G. Dowson and A. Greaves.

Yours very truly,

Georges Potvin.

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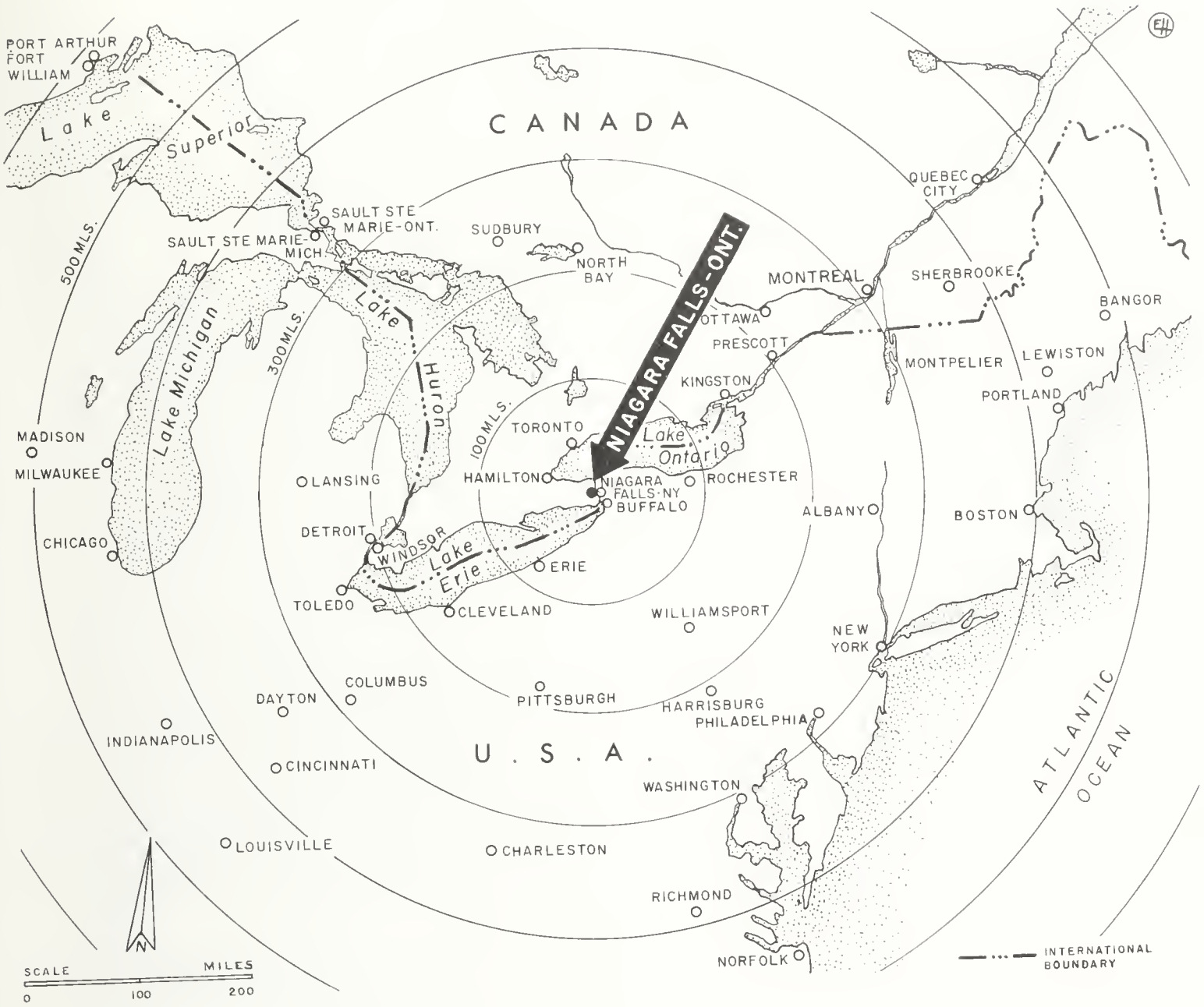
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Chapter One

THE REGION AND ITS ECONOMY

The Niagara Economic Area comprises five counties: Brant, Haldimand, Lincoln, Welland and Wentworth. In aggregate, these counties include 20,861 square miles and contain 724,962 people which represent 12% of the population of Ontario. Between 1941 and 1960, population expanded by 63.2%.

Table 1

POPULATION GROWTH TRENDS

	Total 1941 (a)	Total 1956 (a)	Total 1960 (b)	% change from 1941 to 1960
Niagara Economic Area	444,172	681,643	724,962	63.2
Niagara Region (c)	158,902	261,346	287,035	80.6
Welland County	93,836	149,606	162,589	73.3
Lincoln County	65.066	111,740	124,446	91.3
Niagara Falls	20,589	23,563	22,575	9.6
Niagara Falls Urban Area (d)	31,548	51,411	55,257	75.2
St. Catharines	30,275	39,708	83,941	177.3
Welland	12,500	16,405	35,967	187.7
Port Colborne	6,993	14,028	15,024	114.8

(a) Canada, Dominion Bureau of Statistics, Census of Canada: 1941 and 1956 population.
(b) Province of Ontario, Municipal Directory 1960 (Toronto: Department of Municipal Affairs, 1961).
(c) Includes Lincoln and Welland Counties only.
(d) Includes Niagara Falls, Chippawa and Stamford Township.

In 1961, the largest city was Hamilton (273,991 persons). There were, in addition, the cities of Niagara Falls (53,365 persons), St. Catharines (84,472 persons), Welland (36,079 persons) and Brantford (55,201 persons) and a host of smaller centres. More than 80% of the people in the Economic Area resided in urban places.

Roads.

Since 1939, the Queen Elizabeth Way has been the artery for the articles of trade and commerce in the western sector of the Lake Ontario basin. It made possible rapid transportation that could not be supplied adequately by Highway No. 8. Above the escarpment, Highway No. 20 also focuses on Niagara Falls, while Highways Nos. 3, 54, 57 and 58 link Fort Erie, Port Colborne, Welland, Dunnville, Thorold and St. Catharines, the urban centres in the southeastern part of the Peninsula. In the western part, Highways Nos. 2, 6, 8, 52, 56, 97 and 99 provide a fairly complete network which focuses on Hamilton. There is, in addition, a grid of secondary roads and streets which total 5,323 miles.

Railways.

In the main, Niagara Falls, Fort Erie and Hamilton are the principal railway foci; from these centres the lines twist across the area to service other urban places. The first railway in Ontario was within the Niagara Economic Area, and connected Queenston and Chippawa in 1839. Following this, widespread development took place. The Great Western, in 1854, laid the basis for a rail network and connected Niagara Falls with Hamilton, Toronto, London and Windsor. By the 1860's, four railways were operating in the area; by the 1880's, six companies had railways converging on the Niagara Frontier. During the early 1900's, electric railways were developed. However, the Niagara, St. Catharines, and Toronto Railway was the only one which survived until the 1940's.

Water Transportation.

Hamilton is the largest port in the Economic Area. The Welland Canal, an integral part of the St. Lawrence Seaway, has functioned in various forms since 1829, and provides a navigable water route between Lakes Erie and Ontario.

NIAGARA FALLS AND THE URBAN-CENTERED REGION

The relationships of the Niagara Falls urban complex to such a large territory as the Niagara Economic Area are limited, and it is only by restricting the view to the two counties of Lincoln and Welland that the urban concentration and its hinterland may be viewed in true perspective. Research in 1961 shows that the Niagara Falls urban-centered region really comprises only these two counties.

In order to understand the pattern of past development, and to estimate future potential, it is necessary to examine that region in considerable detail. What are the physical and economic ties which exist between Niagara Falls and its environs? To what extent has the regional economic potential been developed and what are the established economic activities? How have the resources and their utilization affected Niagara Falls and what future pattern of spatial relationships between urban area and hinterland will develop?

AGRICULTURE

It is currently the most extensive land use in the Niagara Region; in 1956, 68.3% of the total area was farmland. This was a decrease of 10% from the acreage recorded in 1941.

The Niagara Region may be divided into two distinct areas of different agricultural potential, namely the Niagara Fruit Belt and the Clay Plain. With the exception of the Fonthill area, the Fruit Belt is located in Lincoln County, on the sand plain, below the escarpment. This area has both the light, sandy soils and moderate winter temperatures required for growing tender tree fruits.

The clay slopes immediately above and below the escarpment furnished 98% of the commercial grape acreage in Ontario. Consideration of the settlement patterns of the region will show that much of the Fruit Belt area is located immediately in the path of rapidly expanding urban agglomerations.

Above the escarpment, there is the Clay Plain, where heavy clay soils predominate. Suited neither to tree fruits nor to other very intensive farming crops, these soils are of relatively low agricultural potential. More than 65 per cent of Welland County has clay soils which are hard to work, poorly drained, and of modest fertility: much of this area is adjacent to Niagara Falls, east of a line drawn from Niagara Falls to Port Colborne. Pastures, hay, and small grains do moderately well, but alfalfa and clover, the mainstay of dairy farming, do poorly. Despite this economic handicap, dairy farming, general farming, and part-time farming are the three main endeavours.

Dairy farming is found in both Lincoln and Welland counties. The latter produces milk for local markets, and is considered to be a high-cost area. Lincoln County is more favourably situated in terms of soil characteristics.

General farming exists, but it is often carried out by part-time farmers. In 1961, 63% of the 1,835 farmers in Welland County were engaged in part-time operations. Many of these farmers keep no livestock and grow cash grains — particularly winter wheat — and hay.

Based on the current potential, future expansion of the agricultural industry on the eastern portion of the Clay Plain seems unlikely. In the west, expansion could take place in Wainfleet Township, and in western Lincoln County, where the land base is better. In Pelham Township, the fruit area could be expanded if the urban growth of Fonthill is arrested. Below the escarpment, the Fruit Belt also has considerable potential, if it is suitably protected from urban encroachment.

THE EXTRACTION OF MINERALS

The Niagara Region, like much of Southern Ontario, has limited mineral resources. Natural gas and structural materials — primarily limestone — are of note.

Limestone Industries.

The limestone industries in the Niagara Region rely on two rock formations: the Guelph-Lockport dolomite of the escarpment brow, and Bois Biane-Bertie Akron formations which are to the Southwest. In 1959, there were ten quarries in operation; five relied on the former source, and five on the latter. Crushed stone was the leading product and there were facilities in the region capable of producing 2,320 tons per hour. However, larger, more efficient quarries in the vicinity of Hamilton limit the market potential.

Two of the quarries relying on the Guelph-Lockport dolomite produced dimension stone for building purposes. The stone, which weathers to a pleasing, silver grey colour, is more durable and harder than internationally famous dimension limestone quarried at Bedford, Indiana. In Ontario, the local limestone should, by virtue of its superiority, be able to dominate the market.

Of importance to the region are quarries located in the vicinity of Beachville, where the Detroit limestone formation is close to the surface. Chemically pure, this limestone is converted to lime and brought into the region for use in the manufacture of calcium cyanamid by firms in Niagara Falls. Local limestone obtained within the region is used for mill stone by a pulp and paper firm at Thorold.

Future expansion of the limestone industry in the area seems likely, but will be limited. Quarries more favourably located meet the crushed stone needs of Hamilton and Toronto; those in Niagara serve only local markets. Dimension limestone for buildings has promise, but other building materials find equal favour in the buildings currently under construction.

Natural Gas.

The eastern portion of the South Western Ontario gas field extends into Welland County. Market potential for natural gas is excellent, but, in 1959, this field supplied only 19.2% of the 87,908,050 million cubic feet (m.c.f.) consumed in the Province of Ontario. The close proximity of local natural gas supplies to the City of Niagara Falls was, for a long time, an advantage which other larger cities in Southern Ontario did not possess. However, gas pipelines from the West, constructed during the last decade, have minimized that advantage.

HYDRO-ELECTRIC POWER

The Niagara Region has been, since 1893, a major source of electric power. Basic to this development is the difference of 326 ft. in elevation between Lake Ontario and Lake Erie. The Niagara River has characteristics which make it of unusual value for the generation of hydro-electric power. These are as follows:

— the average flow slightly exceeds 200,000 cubic feet per second;

— the flow is very regular; little seasonal change occurs;

— the drop between the two lakes is concentrated: on the Niagara River, 97% of the 326-foot drop occurs in an eight-mile section;

— the electric power generated is within economic transmission range of the major nodes of population.

There was early recognition of these unique advantages. In 1893, a 20,000-kilowatt unit was built by private subscription to supply power for an electric railway, which ran between Queenston and Chippawa. Since then, most of the potential of the Canadian portion of the Niagara has been developed. In 1960, the Niagara Region produced 2,110,000 kilowatts, 32% of the current resource of the Ontario Hydro Commission. By international agreement, the water flow over the falls has been reduced by half during daytime summer hours and by three-quarters at night. This has been achieved through elaborate and costly channelization and diversion works. Hydro-electric power production could be further increased by about 30%, if further artificial control and diversion facilities were established and the flow over the falls further reduced.

In the past, hydro-electricity was available to Niagara Falls in large quantities at a lower price than elsewhere in Southern Ontario. Furthermore, between 1917, when Sir Adam Beck Generating Station No. 1 was started, and 1958, when Sir Adam Beck Generating Station No. 2 was completed, the region received economic stimulus from the money released there through construction payrolls and the purchase of necessary materials.

The era of major expansion in hydro-electric power production has virtually passed. Thermo-electric generating stations are now being built close to the large markets. It is estimated by the Ontario Hydro-Electric Commission that, in 1980, generating resources of 22,000,000 kilowatts may be required, of which, thermo-electric generation may account for 8,000,000 kilowatts. Recent developments indicate that an additional 30% of the required electricity may be supplied by nuclear-powered generating stations.

While in the past, lower electric rates and a surplus of power stimulated industrial development at Niagara Falls, a positive advantage in this respect is no longer present. This is explained by the fact that the Ontario Hydro-Electric Commission has adopted a policy of providing local distributing agencies with bulk quantities of electricity at equalized prices. The result is that, in some markets, the retail price of power to consumers is actually lower than the retail charges at Niagara Falls.

THE WELLAND CANAL

Initially developed in 1829, the Welland Canal has been modified on several occasions. In its present form, it extends between Port Colborne on Lake Erie and Port Weller on Lake Ontario, a linear distance of 27.6 miles. The canal can accommodate vessels which draw up to 27 feet.

With the opening of the St. Lawrence Seaway, the canal has assumed new significance in international trade.

While the Welland Canal is not directly connected with the Niagara Falls urban area, the latter derives many intangible benefits from the close spatial association which exists. In the past, industries have been attracted to the Niagara Region by the canal, and many residents have been provided with opportunities of gainful employment.

MANUFACTURING

The Niagara Region.

In 1958, there were 533 establishments which employed 36,679 persons, who earned $157,336,000.00 in wages and produced goods valued at $1,215,684,000.00 at the time of shipment. The City of Niagara Falls accounted for 15% of the establishments, 12% of the employees, 11% of the wages and 6% of the goods produced in the region.

Table 2

	No. of Establishments		No. Employed	
	1949 (a)	1958 (b)	1949 (a)	1958 (b)
Niagara Economic Area	1,373	1,486	108,995	103,851
Niagara Region	485	533	35,969	36,679
Welland County	284	313	22,188	22,222
Lincoln County	201	220	13,781	14,457
Niagara Falls	76	79	6,163	4,414
St. Catharines	104	102	9,899	6.121
Welland	63	52	8,060	2,829

(a) Canada, Dominion Bureau of Statistics, Industries of Canada, 1949. "Section 1, Geographical Distribution". (Ottawa: 1951).

(b) Canada, Dominion Bureau of Statistics, Industries of Canada, 1958. "Section G, Geographical Distribution". (Ottawa: August, 1960).

During the period 1949-1958, a modest growth was recorded.

The Niagara Region had a 10% growth in the number of establishments and a 2% growth in employment. During the same period, Niagara Falls experienced a 4% growth in establishments, but a 28% decline in total employment.

Certain regional specialties are apparent. In terms of employment, 33.6% of the workers in Welland County are employed in iron and steel production, 12.5% in paper products, 9.6% in foods and beverages, and 8.4% in non-metallic minerals. In Lincoln County, 30% are in automotive parts and manufacturing, 18.3% in iron and steel production, and 9.5% in foods and beverages.

Distinct regional concentration is apparent. Apart from the Niagara Falls industrial complex, 55% of the persons employed in the Niagara Region work for firms which are adjacent to the Welland Canal. Indeed the canal seems to have been a focal point for urban activities in the region. Few firms, however, make use of the canal as a means of transportation. Finished products destined for Southern Ontario markets are better shipped by truck or rail transports. It is significant that the large industries in the region are mainly ones which have been established there for several decades. In the canal zone, eleven firms have over 500 employees and, of these, five have 57% of the total employment. Of the 44 firms surveyed, a majority (which, in terms of employment, comprise 92.4% of the industries) had located along the canal zone prior to 1930. The canal, road or rail facilities, cheap hydro-electric power, and proximity to market were the major factors influencing their decision to locate in the region. In certain instances, the factor "personal reasons" was also of considerable significance.

Industrial growth in the future is not expected to depend on the canal or cheap electricity; these advantages are things of the past. What are the advantages of the future? Good industrial sites capable of holding buildings of great weight are available; serviced land is not a problem nor is available labour supply. Access to markets is equal to other rapidly growing centres such as the Kitchener-Waterloo complex.

Certain industries in the area are noted for their high-wage scales; these exceed that which most industries wish to pay. This factor may militate against future industrial growth.

However, the abundant water, good transport facilities and ready access to semi-finished raw materials constitute positive advantages which should be attractive to secondary industries.

The Niagara Falls Urban Area.

The industrial base of the former City of Niagara Falls, the former Township of Stamford and the Village of Chippawa is succinctly described in Tables 3, 4 and 5. Such statistical summaries deserve careful examination since they reveal certain trends which are very significant.

Table 3

FORMER CITY OF NIAGARA FALLS - FORMER TOWNSHIP OF STAMFORD - VILLAGE OF CHIPPAWA
Total of Manufacturing Industries
Selected Statistics*
(1951-1959)

TOTAL EMPLOYMENT AND EARNINGS

Year	No. Establ.	% Increase or Decrease Establ.	No. Employees	% Change Employees	Earnings	% Change Earnings	Value Added	% Change Value Added
1951	89		7,768	+ 1.3	23,628,608		56,128,721	
1952	95	+ 6.7	7,869	+ 0.9	26,066,102	— 10.3	62,333,297	+ 11.1
1953	94	+ 1.1	7,940	— 4.0	26,940,622	+ 3.4	63,655,729	+ 10.1
1954	95	+ 1.1	7,621	+ 0.6	26,506,939	— 1.6	58,393,943	— 14.9
1955	104	+ 9.5	7,668	+ 4.4	27,421,891	+ 3.5	70,134,725	+ 20.1
1956	103	— 1.0	8,007	+ 2.8	31,291,123	+ 14.1	62,898,934	— 10.3
1957	110	+ 6.8	8,228	— 12.8	33,967,359	— 8.6	67,161,785	+ 6.8
1958	105	— 4.5	7,171	— 3.4	31,192,478	— 8.2	61,746,846	— 8.1
1959	102	— 2.9	6,928		30,790,007	— 1.3	63,155,695	+ 2.3

PERCENTAGE TOTAL INCREASE OR DECREASE
(1951 - 1959)

No. of Establishments	+ 14.6%
No. of Employees	— 10.8%
Earnings	+ 30.3%
Value Added	+ 12.5%

These trends are useful indicators in assessing the potential of the area for future industrial growth.

If considered together, the three urban municipalities do not present a picture of sizeable growth (Table 3). Between 1951 and 1959, the number of manufacturing establishments has increased from 89 to 102 (14.6%) while employment is down by 10.8%. Earnings* have grown by 30.3% and value added** by 12.5%.

The decrease in the number of employees is a normal phenomenon, which is largely brought about by the growing trend in industry towards automation. The increases recorded otherwise are weak. This becomes particularly evident when one considers that the urban area has had a 40% increase in population during the period covered. This weakness is confirmed if the rate of industrial development in other urban centres of Ontario, during the same period, is also considered

It is significant that all aspects of manufacturing activity have shown a decline since 1957.

The Former City.

The number of manufacturing establishments has fluctuated over the nine years covered. In 1959, however, the number of plants in operation was exactly the same as in 1951. The number of employees dropped by 37%, earnings by 12.9% and value added by 22.2%.

The former City's territory is heavily built up and there is therefore no sizeable acreage available for modern industrial site requirements or for the expansion of existing plants. This would partly explain the lack of growth in the number of establishments.

One cannot help, however, diagnosing a marked anaemic condition in the industrial activity within the former City. The most significant indicator is the fact that, with the same number of establishments as in 1951, the value added through manufacturing and processing had decreased by 22.2% in 1959.

* Source: Dominion Bureau of Statistics, Ottawa.

** It is to be noted that, in the accompanying tables, all dollar figures represent *current* values. If these values were translated into constant dollars, the over-all increases recorded would be greatly minimized and, in several cases, sizeable decreases would be obtained instead.

Table 4

FORMER CITY OF NIAGARA FALLS
Manufacturing Industries
Selected Statistics*
(1951 - 1959)

TOTAL EMPLOYMENT AND EARNINGS

Year	No. Establ.	% Increase or Decrease Establ.	No. Employees	% Change Employees	Earnings	% Change Earnings	Value Added	% Change Value Added
1951	78		6,830		20,616,294		48,147,384	
1952	84	+ 7.69	6,950	+ 1.76	22,771,033	+ 10.45	54,117,630	+ 12.40
1953	85	+ 1.19	7,021	+ 1.02	23,603,219	+ 3.65	60,638,156	+ 12.05
1954	85	0	6,602	— 5.97	22,416,281	— 5.03	50,131,875	— 17.33
1955	82	— 3.53	5,539	—16.10	19,310,803	— 13.85	52,090,866	+ 3.91
1956	79	— 3.66	5,040	— 9.01	18,638,595	— 3.48	37,833,683	— 27.37
1957	85	+ 7.59	5,044	+ 0.08	19,617,537	+ 5.25	38,549,881	+ 1.89
1958	79	— 7.06	4,444	—11.90	18,095,681	— 7.76	38,831,672	+ 0.90
1959	78	— 1.27	4,303	— 3.17	17,959,893	— 0.75	37,435,071	— 3.60

PERCENTAGE TOTAL INCREASE OR DECREASE
(1951-1959)

No. of Establishments	0 %
No. of Employees	—37.0%
Earnings	—12.9%
Value Added	—22.2%

Former Township of Stamford and Chippawa.

The number of manufacturing plants in these two areas has increased from 11 to 24 (118%), the number of employees by 180%, earnings by 669% and value added by 222%.

The industrial activity shows healthier signs here than in the former City. The rate of growth in value added — the most meaningful indicator — is considerably larger than the increase in the number of plants. In other words, the tendency is for an increasing average productivity per plant.

However, a downward trend is noticeable since 1957. 1959 shows a slight upturn of 2.3% in value added only.

Several decades ago, manufacturing industries were attracted to Niagara Falls because the area offered a few distinct advantages. Amongst these were the following:

(a) the availability of abundant and relatively cheap electric power;
(b) the proximity of the international border, which made Niagara Falls attractive to branch plants of certain American industries, because of Commonwealth preferential tariffs;
(c) the early development of a regional railway and highway network;
(d) the proximity of the Welland Canal;
(e) the fact that the Niagara Frontier was the main bridge of trade between Central Canada and the American Manufacturing Belt, at a time when Canada had to import a much larger proportion of manufactured goods than at present.

Today, these advantages have either disappeared or have been considerably minimized. Several factors have contributed to this change:

(a) the manufacturing economy of Canada has gained an ever-increasing degree of maturity and autonomy;
(b) important regional markets have been developed in Canada and the direction of trade movements has been drastically modified.
(c) the productive resources of other Canadian regions have been developed and, as a result, some of the locational advantages which, at one time, favored the Niagara region, may now be obtained in other areas.

In the future, Niagara Falls can continue to grow industrially, but at reduced pace. The rate of development will largely depend upon the extent and the soundness of promotional activities.

In our opinion, the value of the community's promotional work could be considerably enhanced if a comprehensive survey of the area's industrial potential was undertaken, with a view to determining the specific types of industrial activities for which Niagara Falls is best suited, having regard to all relevant locational factors present in the local and regional contexts. A considerable economy of money, time and effort would result and a greater degree of success could likely be achieved if promotional activities were aimed more direct-

* Source: Dominion Bureau of Statistics, Ottawa.

Table 5

FORMER TOWNSHIP OF STAMFORD AND VILLAGE OF CHIPPAWA

Manufacturing Industries

Selected Statistics*

(1951 - 1959)

TOTAL EMPLOYMENT AND EARNINGS

Year	No. Establ.	% Increase or Decrease Establ.	No. Employees	% Change Employees	Earnings	% Change Earnings	Value Added	% Change Value Added
1951	11		936		3,012,314		7,981,337	
1952	11	0	919	— 2.0	3,295,069	+ 9.39	8,215,667	+ 2.9
1953	9	— 18.0	919	0	3,337,403	+ 1.28	8,017,573	— 2.4
1954	11	+ 22.0	1,019	+ 10.9	4,090,658	+ 22.57	8,262,068	+ 3.1
1955	22	+ 100.0	2,129	+ 108.9	8,111,088	+ 98.28	18,043,859	+ 118.4
1956	24	+ 8.0	2,967	+ 39.4	12,652,528	+ 55.99	25,065,251	+ 38.9
1957	25	+ 4.0	3,184	+ 7.3	14,349,822	+ 13.41	28,611,904	+ 14.1
1958	26	+ 4.0	2,727	— 14.35	13,096,797	— 8.73	22,915,174	— 19.9
1959	24	— 8.0	2,625	— 3.7	12,830,114	— 2.08	25,720,624	+ 12.2

PERCENTAGE TOTAL INCREASE OR DECREASE

(1951-1959)

No. of Establishments	118.2%
No. of Employees	179.9%
Earnings	668.7%
Value Added	222.3%

ly at attracting the types of industries that could be specifically defined through the suggested survey. A clearer and more detailed knowledge of the community's industrial development potential as well as of the particular locational needs of given types of manufacturing, processing and/or service industries would also contribute to the effectiveness of promotional efforts.

Due to the rapid expansion of certain industries (e.g. automotive, pulp and paper, iron and steel, metallurgy) in the region, labour rates are above average. This factor may act as a deterrent to a number of potential industrial newcomers. Nevertheless, Niagara Falls may still compete successfully with other urban areas on the basis of availability and cost of land, quality of internal and regional services, accessibility to raw materials and markets and general economic stability.

Present trends indicate however that manufacturing will play a decreasing role in the urban area's economic development.

RETAIL TRADE

Within the Niagara Region, three urban centres compete for retail trade: Niagara Falls, St. Catharines and Welland. In view of the close spatial relationsnip of these centres, the expansion or contraction of tributary trade areas will largely depend upon the degree of success with which the three centres will achieve a rapid development of their present retail facilities, from the points of view of quality, quantity and variety.

Because of its larger population, St. Catharines has, within its own urban territory, a wider market to rely upon and could find in the latter the impetus needed for the development of a strong regional commercial function. On the other hand, Niagara Falls benefits from a massive influx of tourists, who require, in addition to food and lodging, a variety of retail goods and services. The seasonal character of this market tends, at present, to limit the extent of investments in retail commercial development. While this factor would seem to give a significant advantage to St. Catharines, the long-term prospects of Niagara Falls could be favourable, if the latter were to establish a strong year-round tourist function, by becoming an active convention centre during the fall, winter and spring months. With expanded retail facilities based on a less fluctuating transient market, Niagara Falls could thus compete successfully with St. Catharines in tapping a substantial share of the retail dollars from the Niagara Region.

Reliable and complete statistics are not available on the retail trade of urban centres. This commercial function of Niagara Falls may nevertheless be assessed indirectly, through an examination of the relative importance of retail commerce as a land use.

* Source: Dominion Bureau of Statistics, Ottawa.

An urban community with a population of between 50,000 and 60,000 persons, and having an independent economic and functional base, would normally require total commercial space (for retail, wholesale and warehousing uses) averaging between 3.5% and 4% of its total build-up territory. When related to population the total commercial land use would amount to between 2 and 2.5 acres per 1000 persons. Table 6 describes the existing conditions of retail use in the Niagara Falls urban area.

Table 6

	Total Built-up Area (acres)	Total Retail Use (acres)	% of Built-up Area	Retail Acres per 1000 persons
Niagara Falls Urban Area	10,854	158.3	1.46	2.96
Former City of Niagara Falls	1,597	55.2	3.45	2.53
Former Township of Stamford	8,775	100.3	1.14	3.50
Village of Chippawa	482	2.9	.59	.94

Considering that these figures relate to retail commercial use only and exclude wholesaling, warehousing and commercial lodging accommodation, certain points illustrated in the above table should be emphasized:

1.—While retail commercial uses represent a relatively small percentage of the total built-up expanse in the urban area as a whole, the percentage for the former City of Niagara Falls is high, and reflects primarily the extent to which tourism accounts for the intensity of the retail function.

2.—The importance of this function in the local urban economy is further demonstrated by the high ratio of retail acreage to population in both the former City of Niagara Falls and the former Township of Stamford. (The relatively low (1.14%) ratio of retail use to total built-up area in the former Township of Stamford is accounted for by the particularly low intensity and wide horizontal spread of urban development in that area.)

3.—The Village of Chippawa has a limited retail function which caters almost exclusively to neighbourhood users.

TOURISM AND RECREATION

The Niagara Region

The Niagara Region possesses a considerable potential for tourism and recreation in such natural assets as the Niagara River, Lakes Ontario and Erie and the Niagara Escarpment.

Summer cottage facilities are significant in the region, particularly along the Lake Erie shore, where the temperature of the water and the quality of the beach are superior to those of Lake Ontario. Within the Niagara Region, there are 5,400 cottages in the lakefront townships of Welland County. More than 75% of the owners are U.S. residents, and a steady flow of U.S. dollars thus enters the region. Every municipality derives important revenue from the lakeshore. Certain communities enjoy great expansion during summer months. Crystal Beach, for example, swells from 1,807 persons to an estimated 25,000, while Bertie Township has an increase of 19,000 persons.

The total value of tourism and recreation to the region cannot be determined. Their economic significance is evident, nevertheless, if one considers that accommodation represents only 20% of the tourist dollar.

The potential for the development of regional recreational assets remains relatively unutilized. The scenic quality of the Niagara Escarpment has long been realized, but has yet hardly been developed. In this respect, Thirty Mile Creek, Ball's Falls, Fifteen Mile Creek, and the Old Welland Canal offer significant possibilities. Further attempts to improve the resort aspect of the shores of Lakes Erie and Ontario could be undertaken. The Bruce Trail is also rich in potentialities.

The historical character of the Niagara Region constitutes a cultural wealth which could also be converted into a valuable economic asset. Apart from the preservation of a few historical monuments, the best known of which is Fort George at Niagara-on-the-Lake, and the development of Queenston Heights as a point of historical as well as natural aesthetic interest, there has been very little emphasis placed on the possibilities of enhancing the overall attractiveness of the region to tourists, by bringing its rich cultural past to life.

The Niagara Falls Urban Area.

The main natural asset of the Niagara Region is undoubtedly the river, with its spectacular falls and the downstream rapids. It is a tourist attraction par excellence in North America.

Because of this, and thanks also to the very beautiful parkland strip developed and improved over the years by the Niagara Parks Commission on the left bank of the river, the Niagara Falls urban area is effectively the focal point of tourism within the greater region. The presence of the international Rainbow Bridge has furthered the community's role as a point of major transit and thus enhanced the economic value of the river's attractions.

The magnitude of tourism has reached a critical point in many respects.

Firstly, having grown haphazardly without the benefits of long-range planning, the tourist function has produced forms of physical development which, in many cases, have rapidly become neither economical nor functionally efficient. Furthermore, aesthetic values have often been sacrificed.

Secondly, while the total quantity of accommodation may seem considerable*, the total summer tourist traffic cannot presently be fully handled. The same condition prevails in the dispensation of other services, such as parking**.

Thirdly, the yearly tourist flow has, since 1956, reached a size such as to warrant large-scale investment in highly concentrated facilities emphasizing both increased space and a greater variety of services.

Fourthly, the industry could increasingly be based on year-round operations, with the organization of adequate facilities to cater to the convention trade.

With the decreasing importance of manufacturing as a local economic asset, the urban area should logically look primarily to tourism as its main source of future growth. The size of its potential in this respect can be clearly realized if one considers that over 50% of the thirty billion dollar North American travel market is within a day's drive from Niagara Falls.

NIAGARA FALLS, ONTARIO, AND ITS AMERICAN NEIGHBOUR

Despite the proximity of the two cities of Niagara Falls, they have exerted very little influence on their respective overall economic development. The international boundary separates them and creates virtually complete independence.

Niagara Falls, New York (population 102,394 in 1960) is the larger of the two cities and is part of the Buffalo Standard Metropolitan Area (S.M.A.) In 1954, the Buffalo S.M.A. had 1,829 manufacturing establishments which employed 353,683 persons. Leading products in Niagara County include chemicals, leather goods, paper and rubber goods.

Commercial relationships between the two cities of Niagara Falls are limited by customs regulations. Americans, returning to the U.S.A. from Canada bring a wide variety of articles, usually souvenirs. Canadians returning from the U.S.A. bring in mainly cigarettes and clothing. In addition, some Canadians cross to the U.S.A. to take advantage of the entertainment offered on Sundays which is not available in Ontario. Some significant commuting takes place. It is estimated that several hundred Canadian citizens commute daily from their residences in Niagara Falls and environs to places of employment in the Buffalo S.M.A. The reciprocal flow of Americans into Niagara Falls, Ontario, is minute and amounts to less than 50 persons.

Conclusion

THE NIAGARA REGION AND NIAGARA FALLS — THEIR FUTURE

The Niagara Region has enjoyed considerable expansion and growth during the past few decades. Overall growth in population from 1941 to 1960 was 80.6%. During the same period, the Niagara Falls urban area grew by 75.2%, with most of the population increase occurring in Chippawa and the former Stamford Township. It is estimated that, by 1981, the Niagara Falls urban area will contain almost 100,000 persons.

However, this projected population expansion, if it is to occur, must be accompanied by economic growth.

* The 1961 Assessment records listed 103 motels and 23 hotels. 93 advertised tourist homes were noted in field work. According to the Ontario Department of Travel and Publicity, the urban area could offer commercial lodging accommodation daily to 9,284 persons in 1961.

** The use of parking facilities in the N.P.C. park strip adjacent to the Falls had reached capacity in 1953.

Industrial development took place in response to two main attractions: the Welland Canal and available low-cost hydro-electric power. Today these two resources are of less importance when considered in the overall economic framework of Ontario and Canada. Local and regional raw materials are scanty. Future growth of manufacturing will rely upon the local and regional markets, available land, labour and services, but particularly on transportation.

Agriculture will have a very limited potential above the escarpment. Below, the Fruit Belt has great potential and could be further developed, if it is not forced out of production by the ever-expanding urbanization.

Tourism and recreation offer the best potential for growth. The region posseses attractions which are unequalled in eastern North America, and further developments to induce more tourist spending should be made. In this respect, the Niagara Falls urban community is likely to reap the largest economic benefits.

Chapter Two

THE PRESENT URBAN USE OF THE LAND

A detailed analysis of the mapped data relating to land use which accompany this report reveals certain general characteristics that result from spontaneous urban development around what were once independent and separated settlement nuclei. These characteristics include both advantageous and disadvantageous features. It should be one of the principal objectives of an urban renewal programme to strengthen and improve those patterns of land utilization which function well, to correct those which, on a long-term basis, could advantageously be modified and, finally, to eliminate certain undesirable spatial arrangements because they tend to impede the internal functioning of the urban complex.

Amongst the most important existing land use patterns, the following should be recognized:

1. The overall land use patern within the present Niagara Falls urban community exhibits a high degree of partitionment and much cloistering. This is explained:

— partly by the fact that the present urban complex is the product of growth out of independent and spatially separated settlement nuclei;

— partly by the fact that a rigid municipal boundary has until recently separated the Township of Stamford and the then smaller City of Niagara Falls while Chippawa is still an independent municipal unit;

— partly by the presence of significant man-made barriers, or "lines of discontinuity", such as the railway lines, the Hydro rights-of-way, the diversion canal and the Queen Elizabeth Way.

This partitionment is evident in Niagara Falls to a more striking extent than in most Canadian cities. For obvious reasons, the barriers that have contributed to it are to be considered as permanent features of the urban landscape.

The overall objectives of urban renewal action should include provisions destined to minimize the "barrier effect" of these elements of spatial division. This will necessitate a particularly careful treatment of intra-urban traffic arteries. Another definite aim of urban renewal should be to strengthen those units which are particularly isolated and cloistered. Such is the case, in particular, of the Glenview district (Study Area No. 6), north of the Central Business District and the railway yards, and of the residential complex located east of Victoria Street, between the Central Business District and the Queen Elizabeth Way. Chippawa, though an independent municipal entity, is nevertheless an integral functional part of the Niagara Falls complex. Its political separation and its limited financial means will make it extremely difficult, if not, for the time being at least, impossible, to integrate its renewal requirements and opportunities within a community-wide program.

2. There exist two important concentrations of commercial uses. One (Study Area No. 1), is centred on the Queen Street axis and has tended to expand southward along Victoria Street. The other (Study Area No. 3) lies south of Roberts Street to Murray Street and extends eastward from the H.E.P.C. right-of-way to the park area bordering the river. These two concentrations fulfill distinct and specialized functions, since the first is the Central Business District and the second comprises commercial retailing and service establishments catering primarily to tourists. The remainder of the commercial uses exhibit two rather striking distribution characteristics: they are very much scattered throughout the community, either in the form of relatively small nuclei or in thin and irregular ribbon alignments, and they are widely mixed with other uses both along individual streets and within given structures.

A. The Central Business District shows many weaknesses:

(a) It does not possess a strong focal point in its physical organization and is thus somewhat amorphous. Such a focal point could be provided by the establishment of a well-developed civic centre, that would include a new city hall and group together the community-wide administrative and service facilities, to which there would be advantage in adding all structures housing federal and provincial offices serving Niagara Falls.

(b) It has tended to expand in a long L-shaped form, away from Queen Street, because recently introduced uses and new buildings have sought sites southward along Victoria. Such further linear development should be avoided and the Queen street axis, the logical backbone of the C.B.D., should be re-vitalized through a fuller and more intensive utilization of the land space fronting on it and through expansion in depth rather than in ribbon fashion.

(c) Parking, as well as loading and unloading facilities are inadequate and both vehicular and pedestrian traffic movements are difficult and cumbersome, particularly at peak times. It would thus be desirable to provide off-street space for parking and servicing, as well as vehicular access and exit facilities away from Queen Street through a judicious use of space situated in the rear of the existing rows of structures and by incorporating the immediately adjacent blocks to the North and to the South into the central business zone. Queen Street itself could be converted advantageously to a pedestrian mall.

(d) The present C.B.D. is cloistered and hidden from the adjacent arteries of major traffic, particularly from River Road. A re-vitalized commercial core should be made to open broadly onto the latter street; this could be achieved only through substantial redevelopment in the eastern portion of the commercial district.

(e) The central district is at present structurally and functionally impaired by the presence of two railway crossings of Queen Street, by the existence of a railway line immediately north of it and by a variety of non-compatible uses located mainly in the eastern sector. Much improvement could be achieved through the elimination of one of, and, if economically feasible, both lengths of secondary trackage belonging to the N.Y.C.R.R.; through the improvement of the main rail crossing of Queen Street and through the gradual elimination of non-C.B.D. uses.

(f) High density residential redevelopment should be encouraged in immediate proximity to the Central Business District. The northern sector of the residential neighbourhood situated south of Queen Street offers re-development opportunities that could be used to achieve that objective. Redevelopment on the north side of Queen Street could also be directed to the establishment of high density residential forms if the problem of air pollution emanating from the industrial plants located to the west of the district under discussion can be eliminated. The provision of more intensive residential uses on the outer rim of the Central Business District would contribute to the latter's economic strengthening by contributing a significant increase to its immediate market. Should the continued danger of air pollution militate against the high density residential re-use of lands situated north of the C.B.D., redevelopment in that zone should then aim at providing sites for wholesaling establishments and service industries in need of a central location.

B. The second major commercial sector (Study Area No. 3), south of Roberts Street, should be considered as no less a vital element of the urban landscape. It is at present characterized by a wide-ranging mixture of uses, without any evident separation between those that are tourist-oriented and those not associated with that function. Although it may give to the casual observer the impression of overcrowding, land is not fully used and the ratio of floor space to land is relatively low. Traffic movement within it, is at times extremely difficult and parking and other ancillary facilities are totally inadequate.

Because of its location in proximity to the Falls, this zone is the logical site for the development of intensive forms of land uses catering to the ever-growing function of tourism. One cannot conceive of achieving that objective without a program of large-scale redevelopment, providing an orderly and realistically phased plan of change and involving not only the replacement of most of the existing structures, but also a re-arrangement of traffic arteries, the elimination of non-specialized, non tourist-oriented uses and a substantial increase in the degree of intensiveness of space utilization.

This zone should be considered as having definite potential qualities for the development of a convention centre, as a winter complement to the summer touristic function. This achievement would be to the advantage of the Niagara Falls community as a whole, since it would tend to eliminate the presently marked seasonal fluctuation in the level of economic activity; it would also be a significant incentive to private interests—and thereby accelerate and intensify renewal action—since the opportunity of full year-round operation of commercial and service facilities would offer added attraction to capital investments. In order to achieve this aim, it would be necessary to provide that district with a full range of convention facilities. While the municipal authorities may not feel justified in providing capital funds for the establishment of a publicly-operated convention centre, they should assume the responsibility of encouraging private enterprise to provide the needed facilities, and of facilitating the implementation of any sound private proposals aimed at achieving this objective.

C. It would be desirable to achieve, on a long-term basis, a rational re-grouping of the presently widely-scattered commercial and service uses that have neither a community-wide nor a tourist orientation This could be achieved through the designation of well-defined neighbourhood commercial zones, through the implementation of more rigid zoning controls with respect to retailing, wholesaling and commercial and industrial service establishments, and, finally, through gradual redevelopment.

3. The residential uses are distributed in fairly large and homogeneous neighbourhoods. Functionally, however, they do not exhibit the same degree of homogeneity. There is no significant concentration of high-density apartment housing; yet, multiple occupancy is widely spread and occurs in admixture with single-family structures. Furthermore, because of the abundant opportunities for short-term space rentals, due to the heavy summer tourist demand, rooming houses and tourist homes are particularly numerous in Niagara Falls. Their distribution follows also an indeterminate pattern.

Long-term renewal objectives should include the re-grouping of residential uses into more homogeneous neighbourhoods. The major advantages of such a program may easily be understood:

(a) The social context required by family housing, non-family residences and transient lodgings for optimum performance are quite different and, in some cases, may be totally incompatible.

(b) The demand for ancillary neighbourhood facilities (schools and other institutions, parks and recreational space, etc.) varies considerably according to types of residential function.

(c) Functional and economic densities of residential development also vary widely according to categories of residential requirements. This variation has direct implications on such factors as traffic generation, off-street parking needs, public utilities and servicing demands, land values, etc.

Such long-term re-grouping could be achieved through stricter zoning controls, the implementation of housing occupancy controls, through neighbourhood rehabilitation programs and through redevelopment.

4. Both manufacturing and service industries are widely distributed throughout the community. In the case of the former, which tend to be old-established plants, the choice of sites was conditioned mainly by the location of the main rail and road arteries, at a time when competing uses were not as numerous and as space-hungry. While this has resulted in a rather indiscriminate scattering of establishments in areas which, in many cases, are not to-day predominantly industrial, several manufacturing plants represent individually very extensive amounts of floor space and heavy capital investments; thus, in spite of the undesirable features of their distribution, it would be unrealistic to hope for major spatial rearrangements. As for the service industries, their scattered distribution is due mainly to the lack of adequate zoning controls during much of the period of growth of Niagara Falls. It would be both possible and desirable to aim at a long-term redistribution of the service industries into more compact and homogeneous groupings. This could be achieved partly through a revision of the existing zoning controls and partly through redevelopment.

5. Certain urban uses, while occupying a substantial total amount of land, are not distributed in a pattern that is adapted to serve the present and future needs of individual neighbourhoods. Furthermore, redevelopment, in certain cases (e.g. the tourist and convention zone), is likely to modify drastically the space requirements for certain neighbourhood functions. Discrepancies in the present pattern of distribution may be observed particularly in the case of school, park and open-air recreational facilities. Those uses are also the ones whose space requirements and distributional needs are likely to be most significantly affected by future rehabilitation and redevelopment programs. It is thus important that renewal action should ensure, in as much as it will be feasible, a rational re-apportionment of space for such uses amongst and within neighbourhoods.

6. An analysis of the accompanying maps showing the distribution of gross and net residential densities indicates that, in absolute terms, no part of the urban community exhibits excessively high figures. The situation, however, deserves more careful attention, since the density data, as mapped, do not reveal certain weaknesses inherent in the present patterns of land use generally and, particularly in the modes of residential occupancy.

(a) Some gross residential densities are significantly higher in certain individual city blocks, or groups of blocks, than throughout most of the area. In view of the fact that, in calculating gross densities, non-residential land is included along with the lot space occupied by residential structures, and in view of the fact that, in several blocks, the non-residential space is as large or larger than the land devoted to housing, the gross residential density figures obtained in such blocks would indicate a tendency towards overcrowding of the residential land space. This situation is confirmed through reference to the corresponding net residential densities

(b) The wide discrepancies between the gross and net density figures within given blocks is indicative of the extensive mixture of uses (often mutually incompatible) which has

already been mentioned as one of the major functional weaknesses of the present land use pattern.

(c) The existence of several blocks wherein both gross and net densities are very low is often indicative of the low degree of intensiveness of use and of the presence of sizeable parcels of vacant land within the built-up area. It should be one of the long-term objectives of long-range planning and renewal action in Niagara Falls to fill in the gaps left by such unused space and to increase the intensiveness of the utilization of urban land to more functionally efficient and economic levels.

(d) In view of the fact that apartment housing is neither relatively abundant nor highly concentrated in the built-up community, the relatively high net density figures obtained in certain city blocks or groups of blocks indicate that housing structures planned to accommodate low-intensity usage are, in fact, subjected to overcrowding. This trend is an unhealthy one, particularily when it involves the accommodation of families with children. Overcrowding may cause obvious physical, mental, and social health problems; it has also other serious implications with respect to the internal performance of an urban complex by creating unforseeable, and often unmanageable, situations in respect of traffic generation, adequacy and distribution of park and recreational facilities, adequacy and distribution of school space, utilities and other servicing requirements, etc. Urban renewal action, through zoning and occupancy code enforcement, through neighbourhood rehabilitation and through redevelopment, should be directed to the curtailing and eventual elimination of residential overcrowding.

7. The accompanying map showing the condition of all structures, as well as the sixteen Study Area Tables, point to the relatively low proportion of poor and very poor structures in the overall community of Niagara Falls. This is a reflection of the general standards of construction and maintenance and emphasizes the fact that, on the basis of structural condition alone, the redevelopment needs of Niagara Falls are not very extensive. Furthermore, there are no large concentrations of structures wherein poor and very poor conditions are to be found in a homogeneous pattern of distribution. Much of the redevelopment that will be needed will have to be carried out as a "pruning" process and be integrated within neighbourhood rehabilitation schemes. In most cases, such "spot" redevelopment action could be used as an opportunity to provide a higher degree of intensiveness of re-use, or to increase space to be devoted to park and recreational use within neighbourhoods, or again, to provide off-street parking facilities in those districts of the city which have a particularly high rate of traffic generation. In some cases, space thus released could be used to achieve desirable modifications of the internal street pattern within neighbourhoods.

Buildings in only fair condition, however, account for a substantial proportion of the total structures within some areas and, in certain districts, they may include between 1/3 and 1/2 of all structures. In some cases, such as in the sectors occupied by war-time housing and in much of the districts devoted to mixed uses, the high percentage of fair buildings is substantially due to a combination of relatively low standards of construction and poor maintenance. In other areas, such as the Glenview and Chippawa neighbourhoods, old age and external factors such as sources of abundant atmospheric pollution must be added as contributing factors. As an overall characteristic, however, neglected maintenance is undoubtedly the most important factor. The only effective remedies against this trend are a strict enforcement of a comprehensive maintenance code and a systematic program of neighbourhood rehabilitation.

8. Much of the non-urbanized land is now devoted to agricultural use. The anticipated increase in urban population over the next two decades could be accommodated adequately through the intensification of use in the built-up area and through a minimum amount of conversion of agricultural land to urban usage. It should be a firm long-range policy of the Niagara Falls authorities to protect the maximum possible acreage of agricultural land against disorderly and unnecessary urban encroachment. In addition to serving a valid regional planning objective, it would be to the economic and functional advantage of the community to provide for a gradual and compact occupancy of land by future urban expansion, mainly along its northwestern, western, and southwestern fringes. Although this objective could be implemented primarily through subdivision controls, it does bear implications on the effectiveness of urban renewal within the presently built-up area since the modes of utilization of land within the latter zone could depend significantly upon the degree of availability of alternative space on the outer rim of the urban fringe.

Chapter Three

OBJECTIVES AND METHODS OF URBAN RENEWAL

WHAT IS URBAN RENEWAL?

In its broadest sense, the expression "urban renewal" could be applied to all the varied processes through which, over a more or less long period of time, the physical and structural forms, the administrative framework, the functions and the economic orientation of communities undergo spontaneous or enforced change. In this sense, urban renewal is as old as urban living itself.

In a more technical sense, "urban renewal" is used to designate the processes and means by which the physical and functional evolution of a community may be foreseen, guided and controlled, so that the short and long-term results may produce orderliness, efficiency, economy and a measure of aesthetic quality. When so considered, urban renewel becomes an integrant part of urban planning. Its policies, its programs of implementation, its instruments of control apply to the older, built-up parts of a community (that is, those which are most susceptible to change) and they are intended to ensure that small and large-scale modifications, undertaken individually, through separate public and private initiatives, may all be oriented towards achieving desirable patterns of community growth and may be of the greatest possible service to both private and public interests.

We consider urban renewal as an essential aspect of the community planning process. This is why it is important that the urban renewal program should be closely related to the revised Official Plan.

WHAT DOES URBAN RENEWAL SEEK TO ACHIEVE?

The general aims of urban renewal may be summarized in three objectives:

1. **Conservation,** that is the preservation of existing assets and qualities, the prevention of deterioration and the stabilization of neighbourhoods. This can be achieved largely through the implementation of sound community planning policies and through the use of such instruments as good zoning, an effective building code, a housing and occupancy code, etc., provided that these measures are wisely formulated and unequivocally enforced.

2. **Rehabilitation,** that is the improvement of the physical and functional quality of certain uses and/or areas threatened with serious deterioration. This may be achieved partly through the application of measures such as are outlined above and partly through the initiation of concentrated action directed to the correction or the eradication of specific conditions that are responsible for an advanced degree of deterioration.

3. **Redevelopment**, which involves the eradication of certain uses from more or less large parcels of urban land, and the re-use of the latter either for similar purposes (but in new structures and/or with a modified degree of intensiveness), or for totally different purposes which are adapted to the present conditions and needs of the community. Much redevelopment will be initiated by private enterprise. In such cases, the role of the municipal authority should be to facilitate, guide and control private initiative, so that the results of such individual redevelopment action are made to serve the long-term interests of the community as a whole.

On the other hand, certain public works and special projects may, from time to time, provide the public authorities (municipal, provincial or federal agencies) with opportunities to engage in effective redevelopment.

URBAN RENEWAL AND SLUM CLEARANCE, ARE THEY SYNONYMOUS?

There may be many citizens who are under the impression that urban renewal and slum clearance are one and the same thing and that the two expressions may be used interchangeably. If such be the case, the above comments on the nature and objectives of urban renewal will have helped in correcting this impression. While the term "slum" may logically be applied to all types of structures, it is most commonly accepted to designate

buildings, used primarily for residential purposes, which have reached an advanced stage of physical deterioration. In North American cities, slum clearance projects have most often involved the eradication of blocks of obsolete housing in older urban districts and their replacement with new structures. Slum clearance is thus one form of redevelopment, and one of many urban renewal processes.

WHY SHOULD NIAGARA FALLS UNDERTAKE AN URBAN RENEWAL PROGRAM?

There are many reasons why the Niagara Falls community should become actively interested in a long-term urban renewal program. We may indicate a few of them here:

— Rationalization and intensification of the utilization of space throughout the urban community, in order to ensure greater overall functional efficiency as well as greater economy of total space and services.

— Creation of needed urban assets that are presently either totally lacking or insufficiently developed;

— Correction of existing functional deficiency and undesirable conditions through eradication and redevelopment, or through rehabilitation and correction of salvageable assets.

— Re-organization of land use patterns, as the need and opportunity arise through the anticipated development of major traffic arteries.

URBAN RENEWAL IN THE CONTEXT OF THE AMALGAMATED CITY

The unification of the territory and government of the Niagara Falls urban community will now facilitate the formulation and the implementation of a long-range urban renewal program and, amongst other things:

— provide a broader, more comprehensive physical basis on which to organize the total expansion of the community and to plan the reorganization of those districts which are obsolescent;

— provide uniform standards in the formulation and implementation of control measures (zoning, building, housing and occupancy codes, etc.), which are the rules of "good housekeeping" applicable to urban real estate;

— provide a broader and more solid basis on which will rest any direct financial participation of the municipality in urban renewal action;

— provide a more realistic territorial basis on which to plan the long-range redistribution of population that will likely be made necessary by any large-scale urban renewal activity.

THE METHODS OF URBAN RENEWAL

A comprehensive urban renewal program involves a wide range of processes representing many private and group initiatives. Not only must renewal action be carried out on many fronts, but, to be as fully effective as possible, these varied initiatives and processes should be co-ordinated in the spatial context of the urban territory within which they are to be applied as well as in their timing and phasing.

It is essential to ensure that all renewal activities be integrated within the long-range planning and development program already initiated by the urban community through its Planning Board and which has found its most recent expression in the form of a comprehensive Traffic Study and a revised Official Plan.

Because of the wide-encompassing scope of urban renewal, the most serious danger threatening its effectiveness lies in the possibility of an excessive fragmentation and compartmentation of the various phases of action that it entails. It is therefore most important that, in its over-all view of urban development, the public authority should consider urban renewal as an integral part of planned urban development. As such, it entails two distinct series of processes: those related to the formulation of renewal plans and those related to implementation.

The Planning Board should at all times function as the agency responsible for planning, i.e. formulating objectives and policies. As for the implementation of such objectives and policies, it is likely to be best carried out through a specially created agency whose function would thus be exclusively of an executive nature.

A Co-ordinating Agency

As a first means of action, the City of Niagara Falls should establish a municipal agency whose main function would be to effect this needed co-ordination of all renewal activities. The exact formula of its organization—it could be created as an ordinary municipal department, or as a board or commission—would best be decided upon by the Municipal Council, having regard to the easiest and most effective way of integrating such an agency, both structurally and functionally, within the existing administrative framework. Whatever the form of organization that is to be adopted, however, there are certain principles and conditions which should be accepted and observed, if the urban renewal agency is to function efficiently and successfully. Some are discussed here, because we consider them as most important:

1. The agency should be so constituted as to remain closely connected, through its work rules and procedures, with the Niagara Falls and Suburban Area Planning Board. This is essential, since urban renewal is, by its very nature, directly linked to the over-all function of community planning and development. The formulation of development and re-development objectives and policies should properly remain the object of the advisory role of the Planning Board. The renewal agency, whose creation is suggested here, should be considered as an executive arm of the Council and as its intermediary in the implementation of those planning and development objectives which involve direct renewal action.

2. From the above comments, it follows logically that the urban renewal agency should be given, through its constitution, a wide range of broad administrative and executive powers. This need stems mainly from the fact that the implementation of a renewal program—particularly, but not exclusively, with respect to any government-sponsored phases of it — would require that all short and long-term work programs of the various public departments and agencies, at the federal, provincial and municipal levels, be fully integrated. The urban renewal agency would logically be the main channel and instrument of co-ordination; thus, it is difficult to envisage that its task could be performed successfully in the absence of relatively strong and far-reaching executive and administrative powers.

3. The urban renewal agency, in order to act effectively as the Council's intermediary in the implementation of its renewal policies and decisions, should be given an administrative structure and procedural rules that would ensure continuous and close contact with the Council. Urban renewal implementation would involve the governing body in a continuous process of policy formulation and decision making; it is thus essential that the Council and its agency be in constant liaison.

4. The value of the proposed agency's work will depend in a large measure on the size and quality of its technical personnel and on the adequacy of its budget. Its activities will be both multi-faceted and technically specialized; furthermore, in time, it would become responsible for the sound management of a substantial portion of the City's capital investments in community development.

5. As an essential corrolary to the above principles and conditions respecting the functioning of an urban renewal agency, it is evident that the scope of the work of the Planning Board should be enlarged both in breadth and depth and that both the technical personnel and the budget of that agency should be strengthened. Since it is to remain the main advisory body to Council in matters of planning and development objectives, the initiation of an urban renewal program will impose upon the Planning Board a much increased burden of responsibilities that it could not adequately discharge without an expanded and continuing program of research.

The Direct Role of Government

While a substantial share of renewal activity will likely be privately sponsored, much of the redevelopment task must be undertaken and financed through public initiative. The methods of approach to these undertakings are varied:

1. Some redevelopment may have to be undertaken and financed exclusively or largely by the municipal corporation. A civic centre complex could be a case in point. Another could be a municipal convention centre. It would be desirable if such a project as the latter was made to serve certain renewal objectives. It could be conceived as a cultural centre, of potential benefit to the entire community of citizens. If such be the case, its logical location would be in Area No. 3, where it could easily serve the long-term redevelopment objectives envisaged for this area.

But, apart from such large-scale initiatives, there is the vast range of public works undertakings, the creation and expansion of community services, such as parks, etc.

2. The National Housing Act and Provincial legislation offer various opportunities for many forms of joint partnership between the provincial-municipal, or the federal-provincial-municipal governments, each of which could find applications in Niagara Falls. The main fields of endeavour are listed below:

The preparation of renewal schemes,

Expropriation and clearance of slums,

Land assembly for public and/or private redevelopment projects involving residential or other uses,

Publicly subsidized rental housing for low-income groups,

Limited-dividend housing,

Special-purpose housing, such as old-age homes.

3. In addition, government assistance to urban renewal is available in various forms of loans destined to support individual private or community projects directed to conservation, rehabilitation or redevelopment objectives in approved urban renewal areas. The applicability of such government assistance to specific projects and the particular modes of financial support would, in each case, be determined by the appropriate federal and provincial agencies, namely the Central Mortgage and Housing Corporation and the Ontario Department of Municipal Affairs.

4. In addition to statutory legislation respecting urban renewal, there may be opportunities for the higher levels of government to contribute financially to redevelopment projects.

In Niagara Falls, such opportunities exist with respect to the Niagara Parks Commission which has an exclusive share in some redevelopment objectives and which should also participate in joint undertakings with the local government. There is an obvious need for a much closer co-operation between the Niagara Parks Commission and the Planning Board in the elaboration of development plans sponsored by the Commission and likely to affect the urban community as a whole. While the Commission is a provincial agency operating under an independent charter, it has a definite responsibility to the citizens of Niagara Falls in the sense that its long-term development activities should be integrated as closely as possible into the framework of the City's development. One thinks particularly of such phases as the extension of parks, traffic and parking facilities, wherein the Commission's co-operation is essential.

As another example of non-statutory collaboration, the suggested scheme for the rehabilitation of the Central Business District could involve a substantial participation of the federal government in the relocation of railway tracks, through the use of a special fund administered by the Board of Transport Commissioners.

4. There is finally a special opportunity in Niagara Falls for the Ontario Hydro-Electric Commission to facilitate the processes of urban renewal. Because of its extensive land holdings, much of which is scheduled for disposal, this agency of the Ontario government has a very special responsibility towards the urban community. It is here strongly suggested that arrangements be made between the City of Niagara Falls and the O.H.E.C. to ensure that the latter's land disposal program be so devised as to allow the municipality to use fully the renewal opportunities that such program potentially involves, mainly with regard to rehabilitation and redevelopment.

The Role of Private Enterprise

It is a normal characteristic of our economic system that much urban renewal, through redevelopment, occurs spontaneously, under private sponsorship, in response to local opportunities and needs, as they arise. From a planning point of view, the major problem attached to this form of renewal lies in the fact that individual efforts are independently scattered in space and time, and, because they involve individual parcels of land rather than larger blocks, they tend to yield inadequate structural and functional urban forms.

This consideration is particularly important with respect to Niagara Falls, because of the substantial role which must be fulfilled by private investment in any renewal program and because of the relative attractiveness that tourism and its ancillary functions offer to private capital.

The role of the public authority should therefore be to facilitate and guide the efforts of private enterprise in order that the latter may be channeled as closely as possible towards the achievement of sound development and renewal objectives. In practice, the following three measures are likely to prove the most effective:

1. The introduction in the zoning legislation of site development controls applicable to street blocks rather than the current practice of lot-site controls and the provisions for "bonus zoning".

2. The utilization of expropriation and, wherever applicable, financial assistance from the higher levels of government, in facilitating land assembly for purposes of private redevelopment.

3. The assuming, on the part of the municipal authority, of a share of the burden of providing essential services and facilities.

Chapter Four

SPECIFIC RENEWAL OBJECTIVES AND PRIORITIES

WHAT COULD BE SPECIFIC OBJECTIVES?

The Urban Renewal Study has attempted to determine those specific renewal objectives that should have priority in a long-term program of joint public and private enterprise action:

— The provision of more space for establishments catering to tourists and for ancillary retailing and service activities,

— The consolidation of such space in a large and suitably located district in which favourable physical conditions of development should be created and appropriate control measures applied,

— The rejuvenation and strengthening of the Central Business District as a distinct focal area of community-wide activities,

— The provision of a favourable setting for the development of a convention centre,

— The provision of a favourable setting for the establishment of a civic centre complex,

— The provision of favourable settings for neighbourhood centres of commercial retailing and services,

— The provision of centrally located industrial space to be made available at economic rentals to small service industries,

— The provision of additional community parks and playgrounds,

— The provision of special housing facilities for the aged and for low-rental subsidized accommodation,

— Provisions for additional off-street parking facilities,

— Provisions for an improved transportation network.

CONSERVATION SHOULD HAVE PRIORITY

The total stock of structures and the ensemble of land uses that the City now possesses represent a physical and functional asset, whose general quality and potential life span are good and undoubtedly above average for Canadian cities. The preservation of the qualities of the community's assets should be given first priority in the conception of a renewal program.

The prevention of avoidable deterioration is mainly the responsibility of the individual property owners, but the public authority has nevertheless an important role to play in this endeavour. The municipal responsibilities could best be fulfilled through the implementation of the following measures:

1. A systematic revision of the existing zoning controls in order to incorporate therein the relevant objectives of the revised Official Plan and to ensure particularly against a further development of objectionable land use distribution patterns.

2. A revision of the existing building code so as to improve the minimum standards now in force, particularly with respect to various types of frame construction. Minimum standards higher than those of the National Building Code may in some cases be deemed necessary.

3. The enactment of a comprehensive housing occupancy code aimed at preventing unwarranted deterioration of residential qualities and avoidable functional obsolescence.

4. The enactment of a comprehensive maintenance code setting adequate maintenance standards for all structures and urban uses.

5. A much-needed enlargement and strengthening of the existing building inspection and code enforcement practices.

STRUCTURAL AND FUNCTIONAL REHABILITATION

While conservation implies mainly prevention and relies thereby primarily on negative controls, rehabilitation is aimed at correction and improvement and thus requires positive intervention. As for conservation, the most direct responsibility for rehabilitation rests with the individual owners of property. The role of the public authority must be extensive, however, for the following reasons:

— rehabilitation represents a more costly facet of renewal than conservation;
— in order to be effective, it cannot be undertaken as a series of individual initiatives, unco-ordinated in space and in time;
— some aspects of rehabilitation involve area-wide problems and objectives and could not be achieved solely through private initiative.

Structural Rehabilitation

The accompanying maps relating to building conditions indicate the distribution of the various categories of quality of structures. All fair and most poor buildings could be rehabilitated economically, at least in theory, if a city-wide program were to be implemented immediately. It would be unrealistic, however, to consider this as feasible. As a consequence, some "poor" buildings will continue to deteriorate to a point where they will no longer be economically solvageable, and some "fair" buildings will gradually become "poor" and the cost of their eventual rehabilitation will have thus increased. The most practical approach and objective that the municipal authority could take with respect to rehabilitation would thus be to embark into a systematic program, on a neighbourhood basis, and to carry it out as expeditiously as technical and financial means will permit. The essential elements of such a program are described and discussed here:

1. The renewal agency should, in co-operation with the Council, determine the amounts of moneys that could be made available from public sources over a period of ten to fifteen years. On the basis of the size of available yearly sums, the size of the public share of the rehabilitation program could be assessed for each year and priority assignments could be made.

2. The moneys made available from municipal sources should be channeled into a revolving fund, from which loans would be made to supplement the individual owners' financial capacity, where need be, particularly in cases where the National Housing Act's Home Improvement and Home Extension loan provisions would not be applicable.

3. The City's territory could then be divided into rehabilitation districts, the size of which would be conditioned by the availability of funds and the extent of the rehabilitation task in various neighbourhoods. The present Urban Renewal Study has provided the City with a guide as to the distribution of structural conditions; each neighbourhood rehabilitation program would have to be preceded, however, by a detailed survey of both internal and external conditions of individual structures.

4. In most neighbourhoods, rehabilitation would necessitate the spot clearance of individual non-salvageable structures. In such cases, the local private and public rehabilitation funds could be supplemented through the financial help of higher levels of government.

5. The rehabilitation program within a given neighbourhood should be an opportunity for the public authority to effect a comprehensive functional improvement of the district.

6. Neighbourhood rehabilitation could not be effective without an extensive education program directed at obtaining the fullest participation possible from the residents. In practice, however, such a program could not rely exclusively on the spontaneous collaboration of the owners of property, and an enforcement legislation would be required. The application of such legislation could best be effected through the establishment of a specialized judicial board.

Functional Rehabilitation.

Functional rehabilitation is aimed at correcting defects and improving the performance of all urban uses. It is evident that while, for discussion purposes, it may be considered separately from structural rehabilitation, it should, in practice, be closely integrated with all other aspects of renewal.

The role of the public authority in this field is primordial, since it is only on an area-wide basis that this aspect of rehabilitation can be realistically implemented.

The principal measures that suggest themselves are the following:

1. The utilization of public works programs with other service development measures to effect comprehensive rehabilitation on a neighbourhood basis. What is required in this respect is not so much an enlarged expenditure of money, but rather a more closely integrated and systematic timing and phasing of public expenditures in such areas as street improvement, service replacement and expansion, parks development, school construction, off-street parking facilities and all other utilities and services on a neighbourhood basis.

2. The relief of overcrowded residential conditions through the enforcement of a housing occupancy code, combined with a systematic relocation and public housing program

wherever private financial conditions are inadequate to effect the necessary correction and improvement.

3. A strongly-structured Parking Authority with a long-term objective of total elimination of on-street parking in all zones of heavy traffic.

4. A full use of expropriation powers, with the financial help of higher levels of government, whenever such is applicable, in cases where performance standards (such as off-street parking and loading facilities) cannot be improved otherwise, because private land assembly is not feasible.

Thus, hand in hand with conservation and redevelopment in an integrated renewal action, and financed through the joint efforts of private and public initiative, rehabiliation could be firmly established as a continuous process encompassing, in turn, all the city's neighbourhoods.

RENEWAL PRIORITIES.

As indicated in earlier chapters, urban renewal action must be considered as a fully co-ordinated, multi-faceted and continuous process, involving the joint efforts and finances of both private enterprise and government authorities at all levels.

In practice, however, renewal action must be strictly programmed on a long-term basis, and this implies decisions as to an order of priorities. Such decisions must originate from many sources, but the ultimate responsibility in policy formulation and in the determination of priorities rests with the municipal authority. This responsibility stems from two essential requirements of urban renewal action under the existing politico-economic and legislative system:

— the need for guiding and controlling the initiatives of private enterprise;

— the basic statutory requirement that all public renewal undertakings, even those in which the Federal and/or Provincial governments may participate financially, must be initiated by the local authority.

It thus belongs to the Council of Niagara Falls to decide upon the type of renewal program that is to be undertaken, the emphasis to be given to various aspects of it and the order of its priorities.

The present report's aim is to offer suggestions as to the priorities which, on the basis of the research done, would seem to answer best the local needs and potentialities.

Uppermost in this suggested order would be:

1. The immediate creation of an urban renewal agency;
2. The immediate implementation of a city-wide conservation program, directed to the prevention of avoidable deterioration and, thus, to the minimizing of the total rehabilitation task;
3. The establishment of a continuous neighbourhood rehabilitation program, whereby total comprehensive treatment of all districts of the community would eventually be achieved.

As for the specific area renewal schemes that are illustrated in Chapter Five, our suggestions for an eight to ten year program would be the following:

1. The rejuvenation of the Central Business District. This project has first priority, in our opinion, because of the urgency to consolidate and improve its functional strength, to effect a spatial separation between the community-wide central functions and the commercial and service functions associated with tourism, to avoid a further dissipation of commercial uses throughout the community and improve materially the competitive commercial position of Niagara Falls within the broader Niagara Region.

2. Concurrently with the Central Business District project, the Fallsview Tourist District (Area No. 3) could be considered as a first-priority project. While the Corporation may consider the possibility of establishing a municipal Convention Centre in that district, the principal renewal sponsorship will rest with private enterprise. In terms of total eventual capital investment, this area is likely to receive the largest share. Because of this, and because the pace of renewal here will largely depend upon the very gradual development of investment opportunities in tourism and ancillary functions, the eventual redevelopment of this district will likely be completed over a longer period of years.

3. Area No. 11 in what was once the territory of the Township of Stamford would offer an advantageous next step. It would involve minor redevelopment, but extensive rehabilitation, and would thus present an opportunity of correcting relatively rapidly some strikingly undesirable conditions in what is otherwise a good sector of the urban community.

4. Area No. 2, immediately south of the Central Business District would be a logical sequence. Generally a good-quality neighbourhood, it requires spot clearance and some rehabilitation, particularly in its northern part. Redevelopment here should emphasize higher density housing; this would be more economical, more attractive to private investors in

the re-use of cleared parcels, and functionally more efficient, particularly since the contemplated higher density of population would enhance the size of the immediately adjacent market of the C.B.D's commerce and services.

5. The Glenview District, north of the Central Business District, could possibly be considered also for comprehensive renewal treatment within the next ten years. At the present time, this neighbourhood suffers from structural deterioration, a weak functional performance stemming from its rather erratic land use pattern and from relative isolation to which a serious problem of atmospheric pollution from a neighbouring industry is added. Redevelopment needs here would be substantial: commercial and industrial uses, expanded accommodation for a larger neighbourhood population through an increase in housing density and the provision of more extensive neighbourhood amenities. Technical improvements in air pollution control may perhaps make a solution to the local problem economically less difficult than it is at present.

6. Should the need be felt to provide Niagara Falls with a larger acreage of potential industrial sites, Area No. 16 would be a logical district. It does not possess strong residential amenities; it could be attractive to certain small-to-medium-size processing or service industries, and a renewal program here would involve mainly clearance and relocation.

Chapter Five

RENEWAL NEEDS AND OPPORTUNITIES IN SPECIFIC AREAS

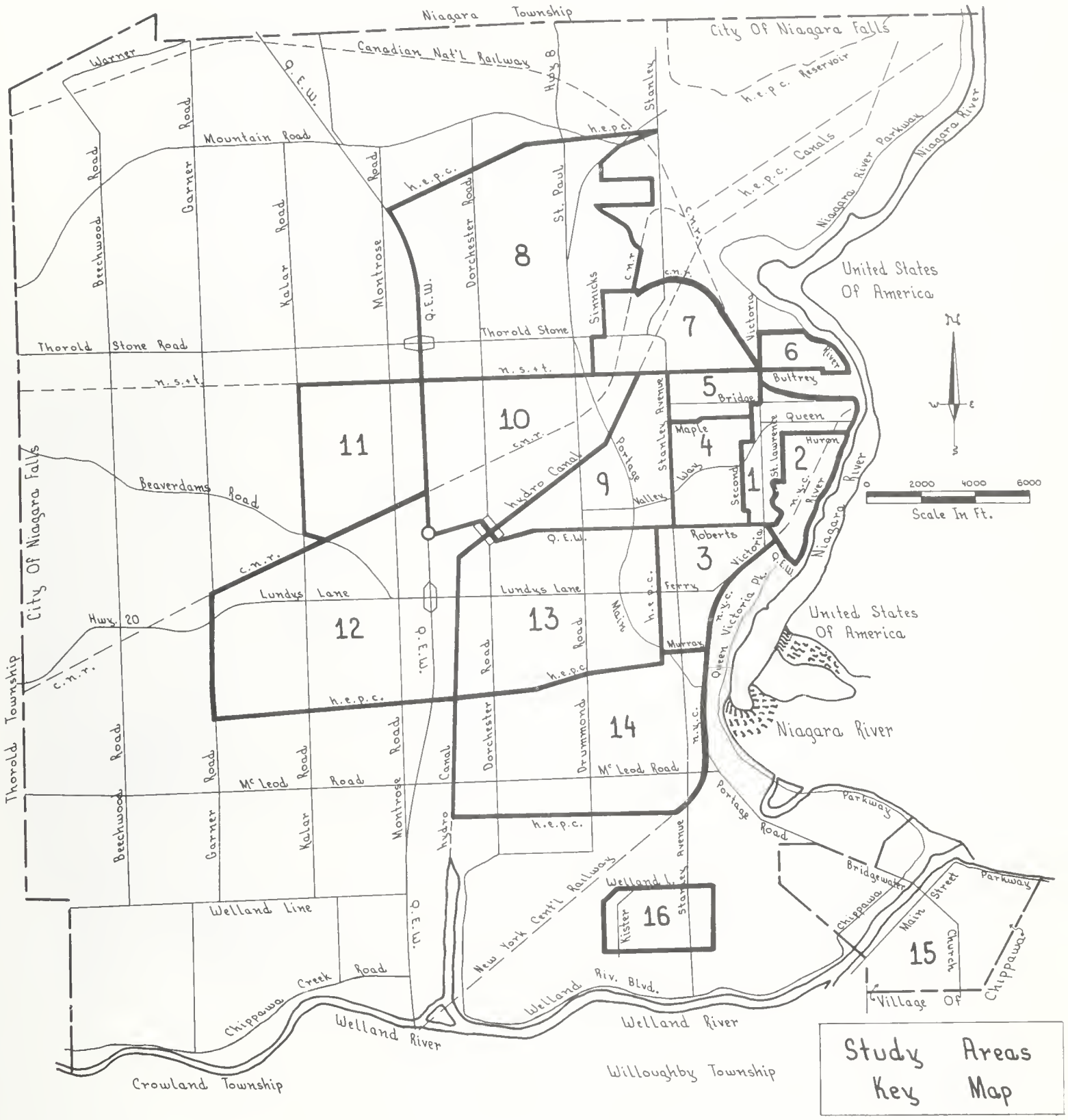
On the basis of existing land use, structural conditions and present performance characteristics and having regard to potential future pressures for a re-allocation of portions of the urban territory to new and more intensive forms of utilization, sixteen districts of the Niagara Falls community were analysed in detail, with a view to determining their specific renewal needs.

This analysis is presented in the following pages of the present chapter. The land use and the conditions of all structures (as of 1961) in each of the areas under study are pictured in thirty-two maps and further relevant data are provided in the accompanying sixteen tables. Such detailed information, in order to be understood fully, should be viewed in the context of the general analysis, comments and suggestions contained in Chapters Two, Three and Four. The following maps and tables were prepared to enable the reader to obtain a graphic description of the conditions that past urban growth has produced and of the main factors likely to affect the extent and form of renewal action in various parts of the community.

For each of the sixteen districts, the map showing the condition of buildings provides an indication of the most elementary renewal needs — conservation, rehabilitation or clearance — in terms of both extent and location. Building condition is not, however, the only determining factor. In some neighbourhoods, certain blocks of residential structures are overcrowded (cf. the city-wide map showing net residential lot densities by block), in spite of the fact that the overall neighbourhood density may not be excessive. This stems from the fact that, frequently, the poorer residential structures serve to house more persons than they were designed to accommodate comfortably. In other cases, reference to the land use map will indicate a rather erratic distribution of uses and an undesirable admixture of activities not mutually compatible. In such cases, urban renewal action should not be aimed exclusively at correcting and improving structural conditions, but should also seek a better arrangement of land use patterns in individual districts. In still other cases, a neighbourhood renewal program should have the further objective of providing space to improve the performance of existing uses or to permit the establishment of new forms of utilization to serve district or city-wide purposes.

The accompanying maps and tables thus describe the specific area and functional settings for public and private urban renewal projects. Such projects can be viewed realistically only in a time sequence covering several years. It is nevertheless the community's responsibility to consider its renewal needs in a comprehensive, all-embracing way and to formulate a long-term program providing for the necessary integration of successive and spatially separated projects. This long-range urban renewal program would thus be an important instrument of implementation of the community's Official Plan.

Also contained in this chapter are design sketches suggesting different approaches to the renewal of parts of specific districts of the community. It should be emphasized that these sketches and their accompanying explanatory comments are presented as examples of possible treatment only. The preparation of detailed Renewal Schemes was beyond the scope of the Urban Renewal Study and will have to await the eventual decisions of the City Council with respect to priorities.

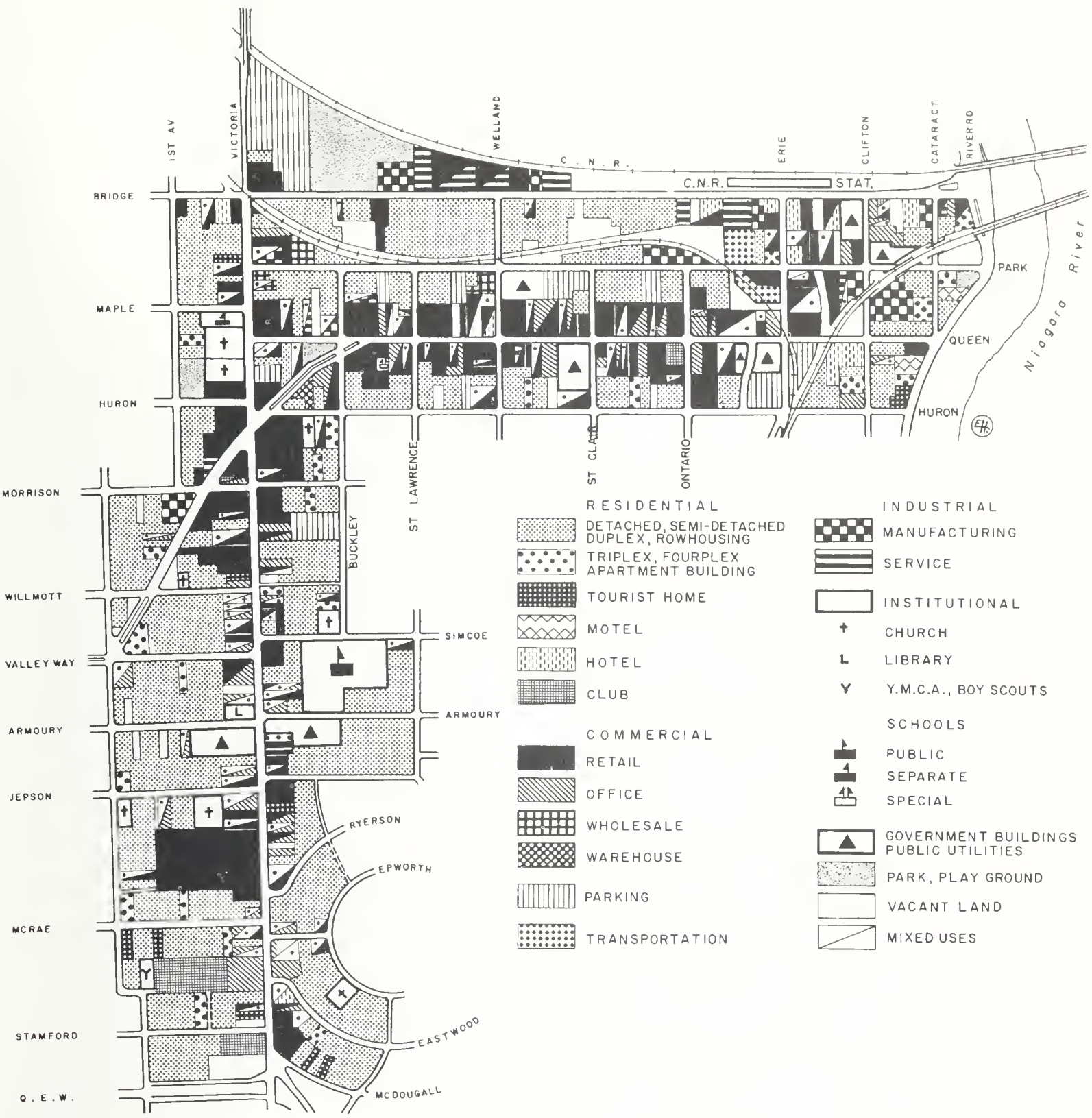

Niagara Township
City Of Niagara Falls
Canadian Nat'l Railway
Hwy 8
Stanley
h.e.p.c. Reservoir
Warner
Q.E.W.
Mountain Road
h.e.p.c.
h.e.p.c. Canals
Niagara River Parkway
Niagara River
Beechwood Road
Garner Road
Kalar Road
Montrose Road
Dorchester Road
St. Paul
8
c.n.r.
United States Of America
Simmicks
Victoria
7
6
Thorold Stone Road
Thorold Stone
n.s.+t.
River
Bultrey
5
Bridge
10
11
Maple
4
Queen
Huron
St. Lawrence
Portage Way
Stanley Avenue
Hydro Canal
9
Valley
Second
1
2
n.y.c.
River
Beaverdams Road
Roberts
3
Victoria
Q.E.W.
Niagara
City Of Niagara Falls
Lundys Lane
Ferry
Hwy. 20
12
13
Main
h.e.p.c.
Murray
Queen Victoria Pk.
United States Of America
Thorold Township
Mc Leod Road
14
Drummond Road
Niagara River
Hydro Canal
Portage Road
Parkway
h.e.p.c.
Welland Line
Welland Ave.
New York Cent'l Railway
16
Kister
Bridgewater
Chippawa
Main Street
Church
15
Village Of
Chippawa Creek Road
Welland River
Welland Riv. Blvd.
Crowland Township
Willoughby Township
N
W
E
S
0
2000
4000
6000
Scale In Ft.
Study Areas Key Map

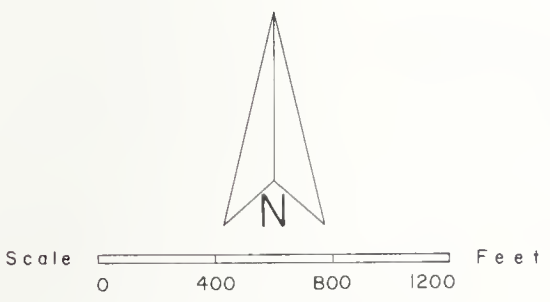
STUDY AREA NO. 1

CLASSIFICATION OF LAND USES

TYPE OF USE	Present Acreage	% of Total Present Acreage
Residential—Single Family	28.63	32.00
Residential—Multiple Dwellings	.93	1.10
Motels - Hotels	1.92	2.45
Commercial Retail	1.19	1.41
Commercial Offices	.08	0.94
Private Clubs	.52	0.61
Warehousing	.07	0.08
Wholesaling	.86	1.02
Manufacturing	9.48	11.24
Service Industries	—	—
Institutions	3.02	3.58
Government and Utilities	.89	1.05
Parks	3.66	4.34
Transportation	2.94	3.48
Residential Streets	12.45	14.76
Non-Residential Streets	10.37	12.30
Vacant Land	7.29	8.64
Agriculture	—	—

Total Acreage of Study Area:	84.30
Population of Study Area:	1240
Present Acreage Per 1000 Persons:	24
Present Gross Density of Population:	14 pers/acr.
Present Net Density of Population:	42 pers/acr.





EXISTING LAND USE

ILLUSTRATION

Study Area 1

CONDITION OF ALL STRUCTURES

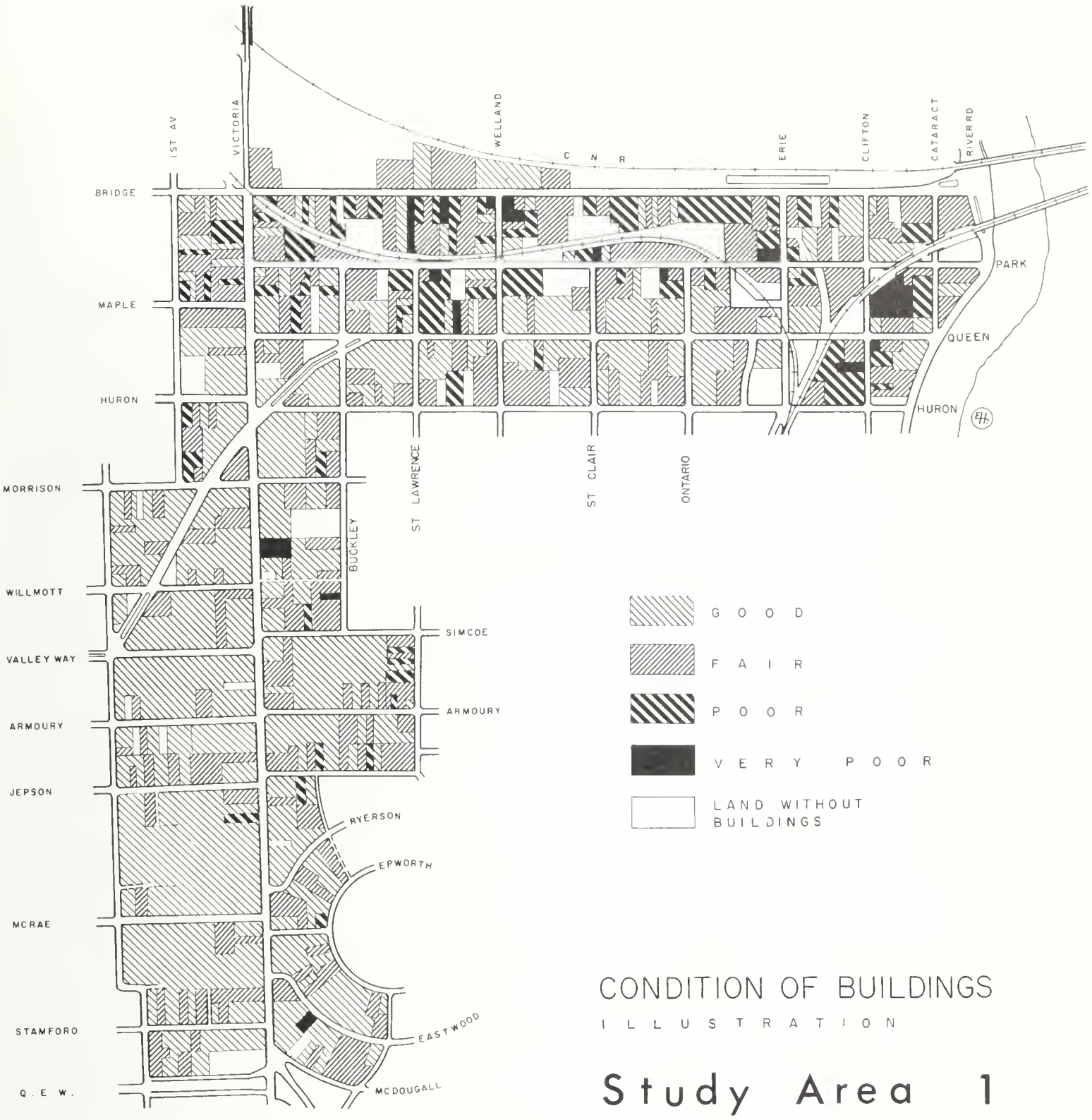
Classification	No. of Structures	Percentage
Good	142	43
Fair	150	46
Poor	34	10
Very Poor	4	1
TOTAL	330	100

CONDITION OF RESIDENTIAL STRUCTURES

Classification	No. of Structures	Percentage
Good	124	43
Fair	131	46
Poor	29	10
Very Poor	3	1
TOTAL	287	100

SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

Lot Space:	3.97 acres
Percentage of Total Residential Land:	13.36%



CONDITION OF BUILDINGS

ILLUSTRATION

Study Area 1

THE CENTRAL BUSINESS DISTRICT

(Study Area No. 1)

The suggested treatment would emphasize both rehabilitation (hatching) and redevelopment (shown unhatched). The strengthening of the central business function along Queen Street would be achieved through a multi-faceted project predicated on the joint participation of government and private enterprise.

The relocation of the M.C.R. spur line would eliminate a major obstacle to an adequate distribution and performance of land uses both in the eastern sector of the Queen Street complex and along its northern margin. Queen Street itself would be transformed into a mall divided into three sections. This, coupled with the provision of ample off-street parking (shown as P), loading and unloading space in the rear of the establishments, would insure ideal conditions for intensive pedestrian use, while preserving essential arteries for internal vehicular movements.

Access to the Central Business District off River Road would be considerably improved and the aesthetic quality of this eastern approach would be enhanced through the provision of open space between River Road and the railway lines and through the creation of a wide boulevard.

Beyond the viaduct, this boulevard would open onto the present City Hall site which, if enlarged, could be occupied by a civic centre. Consideration should not be limited to this location, however, as a more detailed study of this area could indicate other potential sites for a civic centre in the C.B.D.

Most of the existing commercial structures on both sides of Queen Street would be preserved. Extensive clearance of buildings would provide space to the North either for high density residential use or for wholesaling or service establishments.

CANADIAN NATIONAL RAILWAY YARDS
C.N.R. STATION
C.P.R. STATION
CANADA COACH LINES
CANADA CUSTOMS
SCHOOL GROUND
ST PATRICK CHURCH
ST PATRICK HALL
POST OFFICE
BRIDGE
MAPLE
HURON
ERIE
ONTARIO
DUFFERIN
MORRISON
ST LAWRENCE
ST CLAIR
SCALE FEET
0 100 200 300
N
GEORGES POTVIN & ASSOC
LAND USE CONSULTANTS
1961

STUDY AREA NO. 2

CLASSIFICATION OF LAND USES

TYPE OF USE	Present Acreage	% of Total Present Acreage
Residential—Single Family	57.03	39.50
Residential—Multiple Dwellings	0.76	5.40
Motels - Hotels	1.58	1.12
Commercial Retail	10.45	6.73
Commercial Offices	—	—
Private Clubs	0.08	0.05
Warehousing	2.55	1.81
Wholesaling	0.56	0.39
Manufacturing	11.85	7.43
Service Industries	0.84	0.59
Institutions	0.20	0.14
Government and Utilities	—	—
Parks	0.13	0.92
Transportation (Railways)	7.90	4.62
Residential Streets	22.35	14.04
Non-Residential Streets	7.16	5.09
Vacant Land	5.92	4.21
Agriculture	—	—
H.E.P.C.	11.20	7.96

Total Acreage of Study Area:	140.56
Population of Study Area:	2099
Present Acreage Per 1000 Persons:	28
Present Gross Density of Population:	15 pers/acr.
Present Net Density of Population:	36 pers/acr.

CONDITION OF ALL STRUCTURES

Classification	No. of Structures	Percentage
Good	191	36
Fair	280	53
Poor	52	10
Very Poor	6	1
TOTAL	529	100

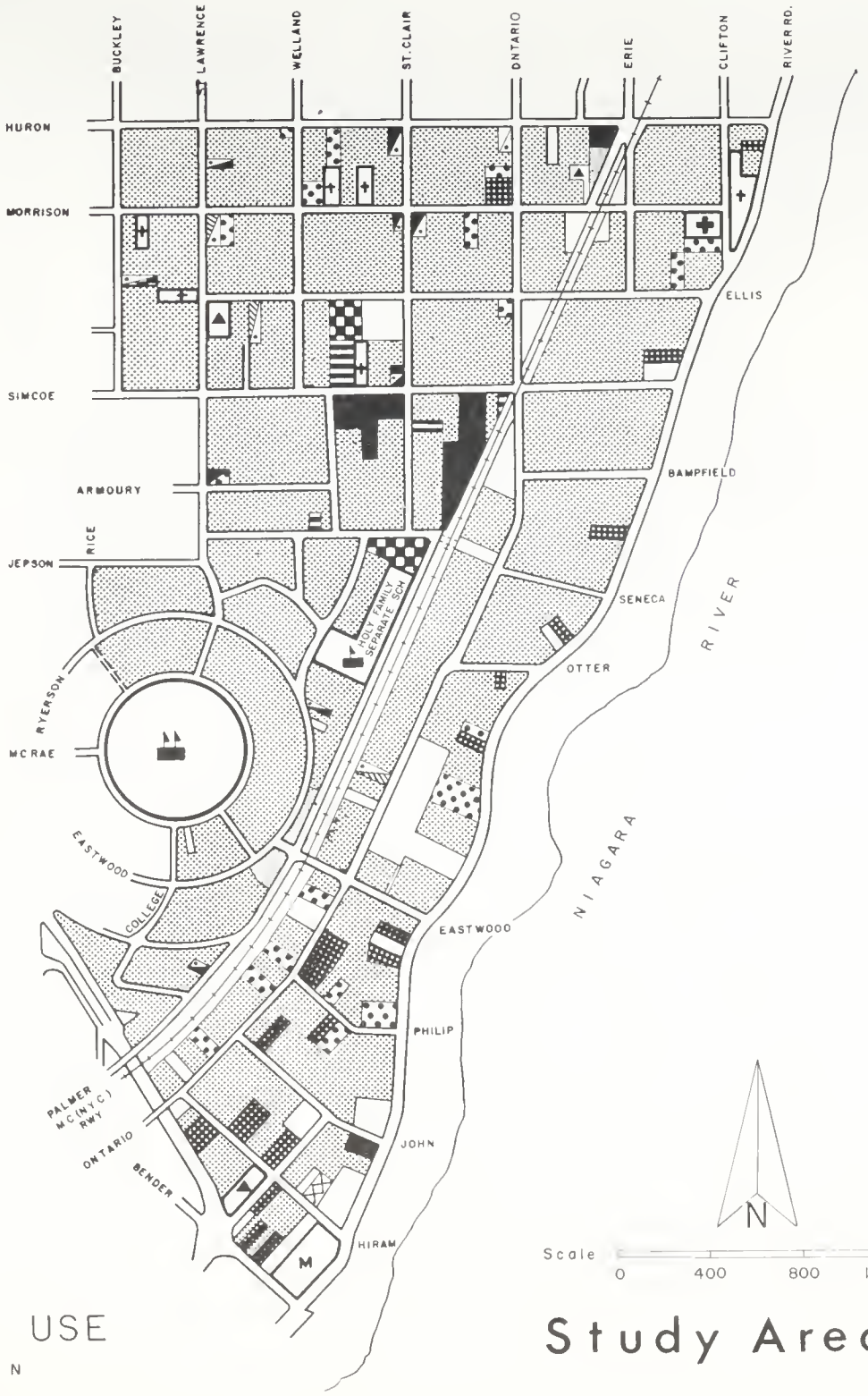
CONDITION OF RESIDENTIAL STRUCTURES

Classification	No. of Structures	Percentage
Good	179	36
Fair	267	54
Poor	46	9
Very Poor	6	1
TOTAL	498	100

SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

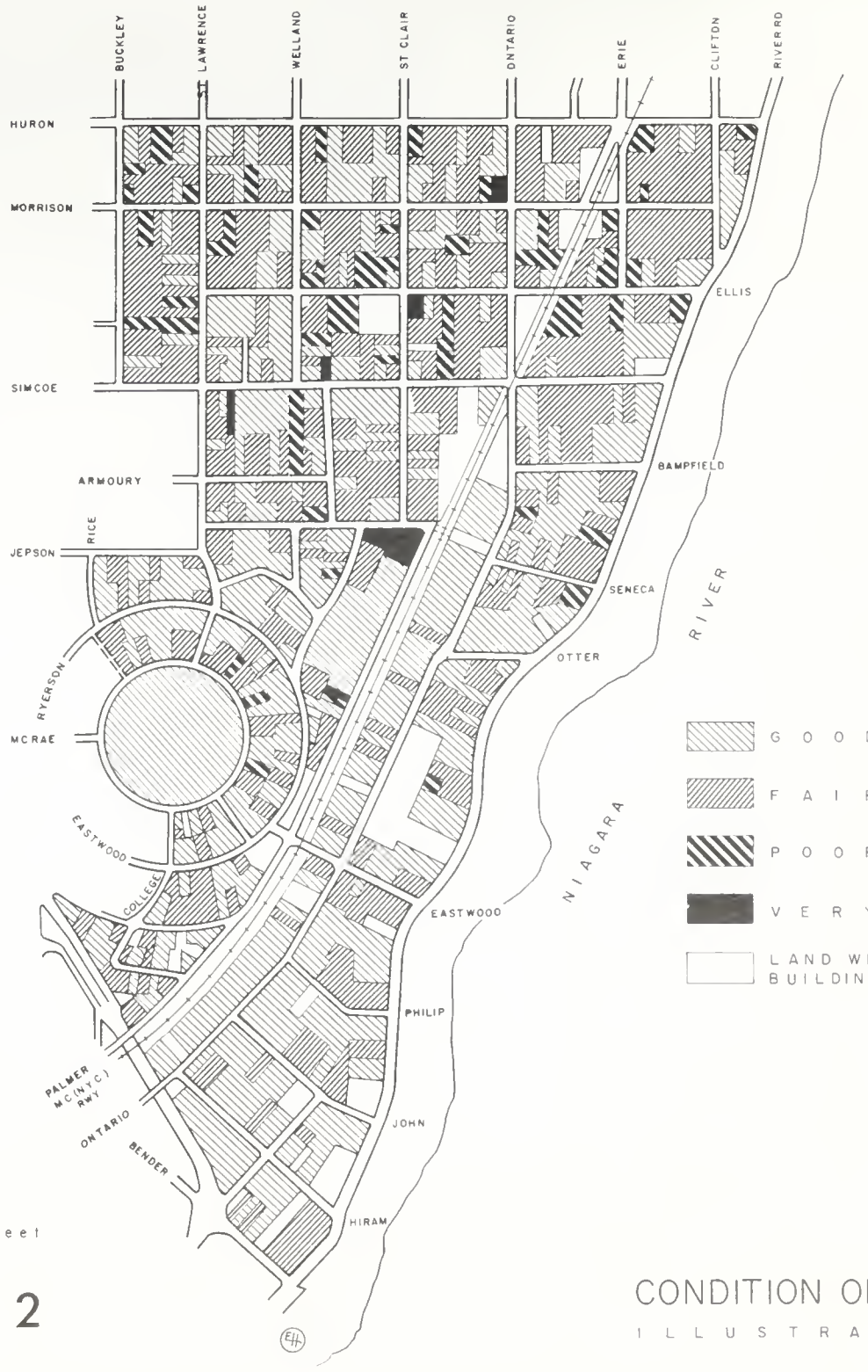
Lot Space:	6.28 acres
Percentage of Total Residential Land:	10.87%

RESIDENTIAL
DETACHED, SEMI-DETACHED DUPLEX, ROWHOUSING
TRIPLEX, FOURPLEX APARTMENT BUILDING
TOURIST HOME
MOTEL
COMMERCIAL
RETAIL
OFFICE
INDUSTRIAL
MANUFACTURING
SERVICE
INSTITUTIONAL
CHURCH
HOSPITAL
MUSEUM
HIGH SCHOOL
GOVERNMENT BUILDINGS PUBLIC UTILITIES
PARK, PLAY GROUND
VACANT LAND
MIXED USES



EXISTING LAND USE
ILLUSTRATION

Study Area 2



GOOD
FAIR
POOR
VERY POOR
LAND WITHOUT BUILDINGS

CONDITION OF BUILDINGS
ILLUSTRATION

THE PALMER - ST. CLAIR DISTRICT

(Study Area No. 2)

Some older houses in the eastern and southern sectors have already become tourist homes, as indicated on the plan by the darker shading

The area requires extensive rehabilitation treatment with spot clearance of the poorest structures. These are located mainly in the northern sector. Higher density residential re-use would be beneficial to the commerce and service establishments of the Central Business District, immediately to the North. This neighbourhood could provide favourable settings for small housing units for the aged.

QUEEN ST MALL
PARK
HURON
MORRISON
ELLIS
SIMCOE
ARMOURY
JEPSON
AYERSON
EPWORTH
CARROL
McDOUGALL
COOKMAN
BENDER
MUSEUM
SENECA
OTTER
EASTWOOD
PHILIP
JOHN
KIRK
PLAY GROUND
PS
VICTORIA
BUCKLEY
LAWRENCE ST
WELLAND
ST CLAIR
ONTARIO
ERIE
CLIFTON
RIVER ROAD
PALMER
HUTTON
RICE
BANFFIELD
NIAGARA RIVER
N
Scale
Feet
0
200
400
600
GEORGES POTVIN & ASSOCIATES
LAND USE CONSULTANTS
1961

STUDY AREA NO. 3

CLASSIFICATION OF LAND USES

TYPE OF USE	Present Acreage	% of Total Present Acreage
Residential—Single Family	158.14	58.89
Residential—Multiple Dwellings	1.75	0.65
Motels - Hotels	2.07	0.76
Commercial Retail	1.06	0.39
Commercial Offices	0.08	0.02
Private Clubs	2.85	1.05
Warehousing	—	—
Wholesaling	0.49	0.18
Manufacturing	0.11	0.04
Service Industries	0.16	0.05
Institutions	12.80	4.75
Government and Utilities	—	—
Parks	5.16	1.91
Transportation	—	—
Residential Streets	60.14	22.36
Non-Residential Streets	7.18	2.66
Vacant Land	2.77	1.03
Agriculture	—	—
H.E.P.C.	14.16	5.26

Total Acreage of Study Area:	268.92
Population of Study Area:	4814
Present Acreage Per 1000 Persons:	33
Present Gross Density of Population:	17 pers/acr.
Present Net Density of Population:	30 pers/acr.

CONDITION OF ALL STRUCTURES

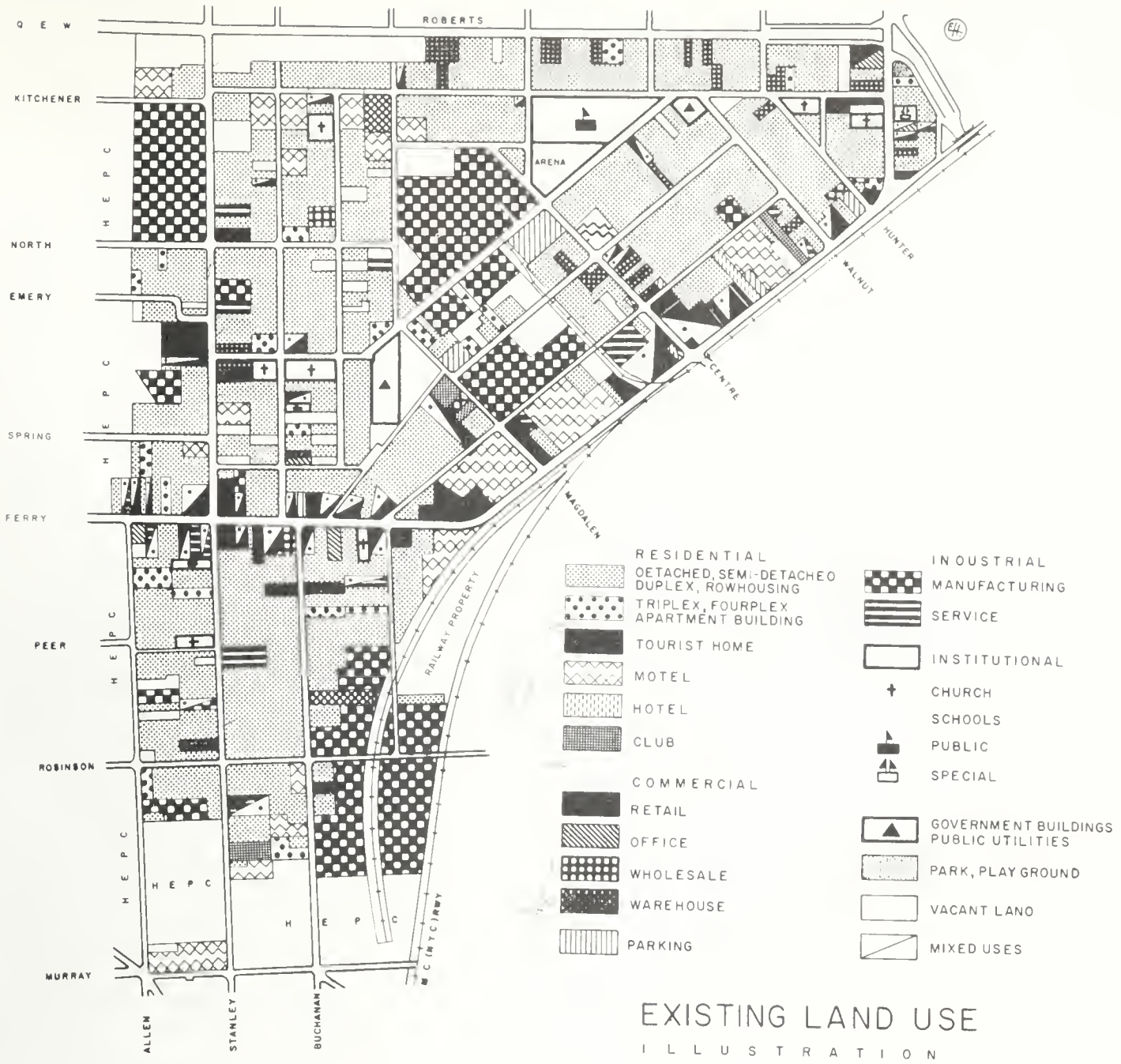
Classification	No. of Structures	Percentage
Good	789	64
Fair	424	34
Poor	27	2
Very Poor	—	—
TOTAL	1240	100

CONDITION OF RESIDENTIAL STRUCTURES

Classification	No. of Structures	Percentage
Good	773	64
Fair	424	34
Poor	27	2
Very Poor	—	—
TOTAL	1224	100

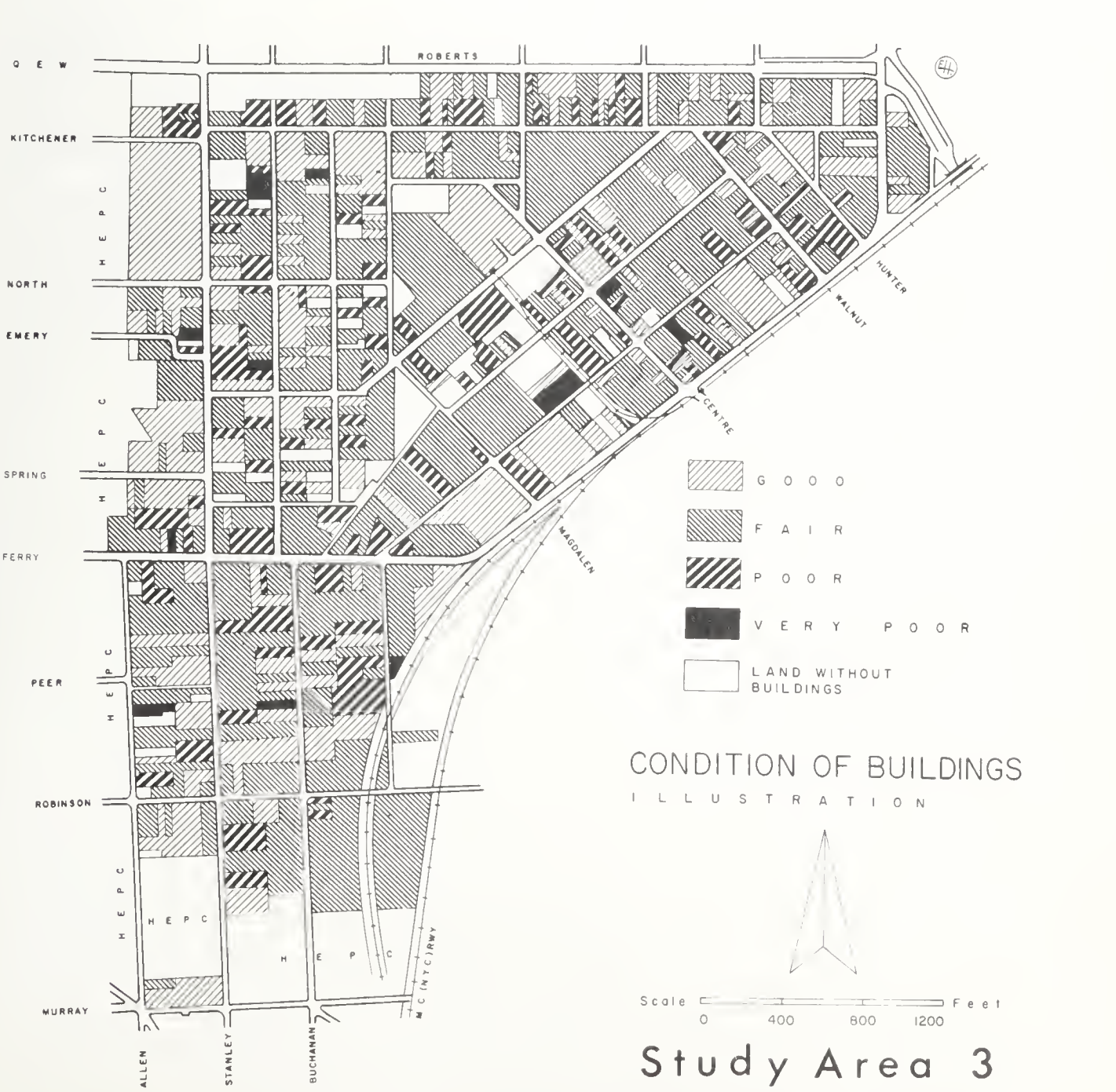
SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

Lot Space:	2.80 acres
Percentage of Total Residential Land:	1.75%



EXISTING LAND USE

ILLUSTRATION



CONDITION OF BUILDINGS

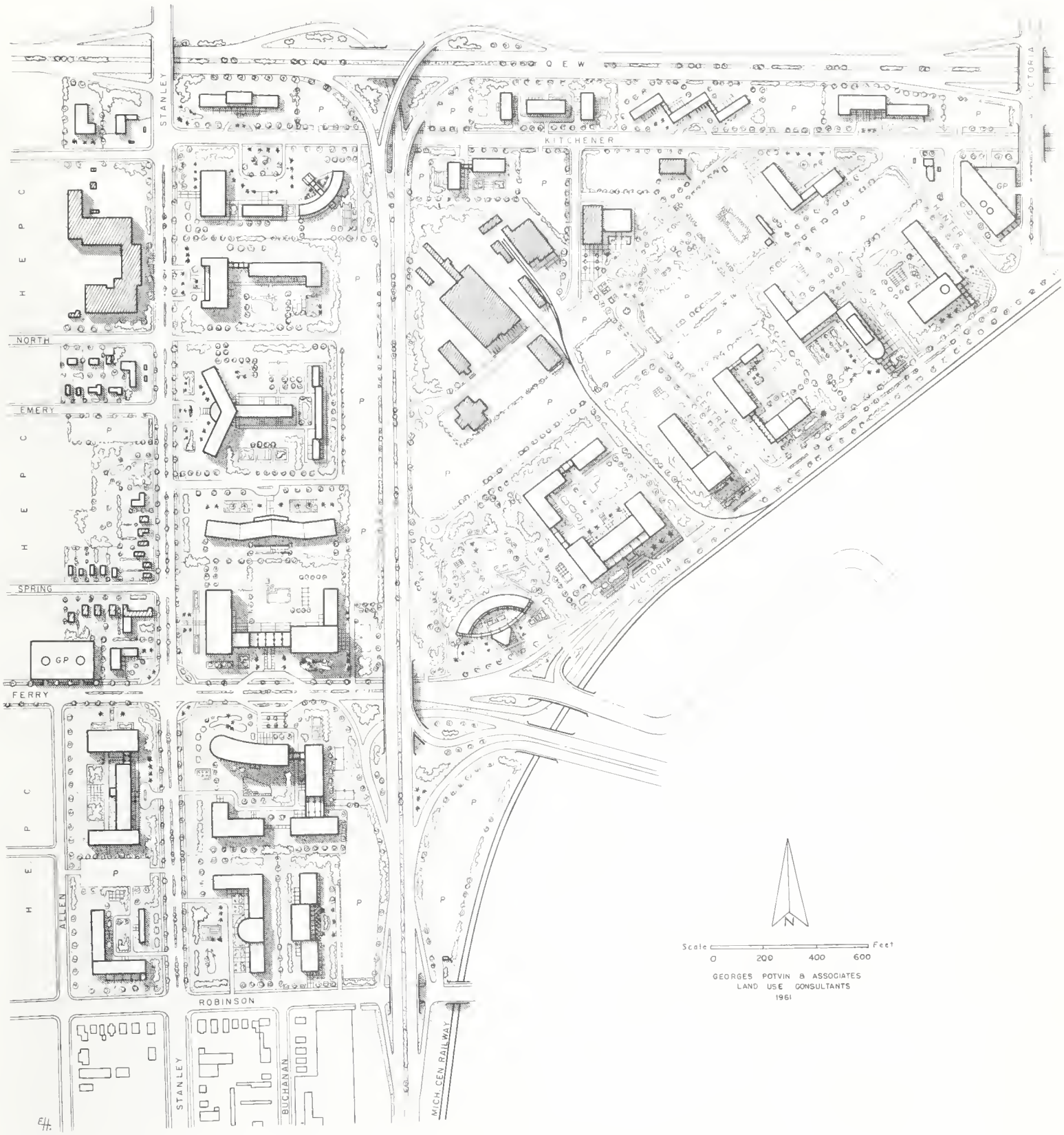
ILLUSTRATION

Study Area 3

THE TOURISM AND CONVENTION DISTRICT

(Study Area No. 3)

Extensive redevelopment is suggested here. In view of its proximity to the Falls, this is the logical zone for a large-scale, intensive development of facilities catering to tourism in summertime and a potentially important convention function occupying the autumn, winter and spring months. The scheme allows also for a much-needed re-organization of internal traffic arteries. A major industrial complex, with its own railway spur line, has been preserved; it could continue to function in the renewed setting and would not be a factor of impairment to other activities if its site was adequately buffered by a belt of open space and by the planting of trees around it.


STANLEY
Q E W
KITCHENER
VICTORIA
H E P C
NORTH
EMERY
SPRING
GP
FERRY
ALLEN
ROBINSON
STANLEY
BUCHANAN
MICH. CEN. RAILWAY
HUNTER
CENTRE
VICTORIA
N
Scale
Feet
0
200
400
600
GEORGES POTVIN & ASSOCIATES
LAND USE CONSULTANTS
1961

STUDY AREA NO. 4

CLASSIFICATION OF LAND USES

TYPE OF USE	Present Acreage	% of Total Present Acreage
Residential—Single Family	15.44	5.3
Residential—Multiple Dwellings	—	—
Motels - Hotels	6.96	2.5
Commercial Retail	3.93	1.4
Commercial Offices	0.17	.1
Private Clubs	—	—
Warehousing	0.61	.2
Wholesaling	—	—
Manufacturing	186.39	66.1
Service Industries	0.43	.2
Institutions	—	—
Government and Utilities	—	—
Parks	—	—
Transportation (Railways)	11.42	4.1
Residential Streets	2.89	1.0
Non-Residential Streets	6.26	2.2
Vacant Land	5.08	1.8
Agriculture	—	—
H.E.P.C.	42.57	15.1

Total Acreage of Study Area:	282.15
Population of Study Area:	313
Present Acreage Per 1000 Persons:	49.3
Present Gross Density of Population:	1.1 pers/acr.
Present Net Density of Population:	20.3 pers/acr.

CONDITION OF ALL STRUCTURES

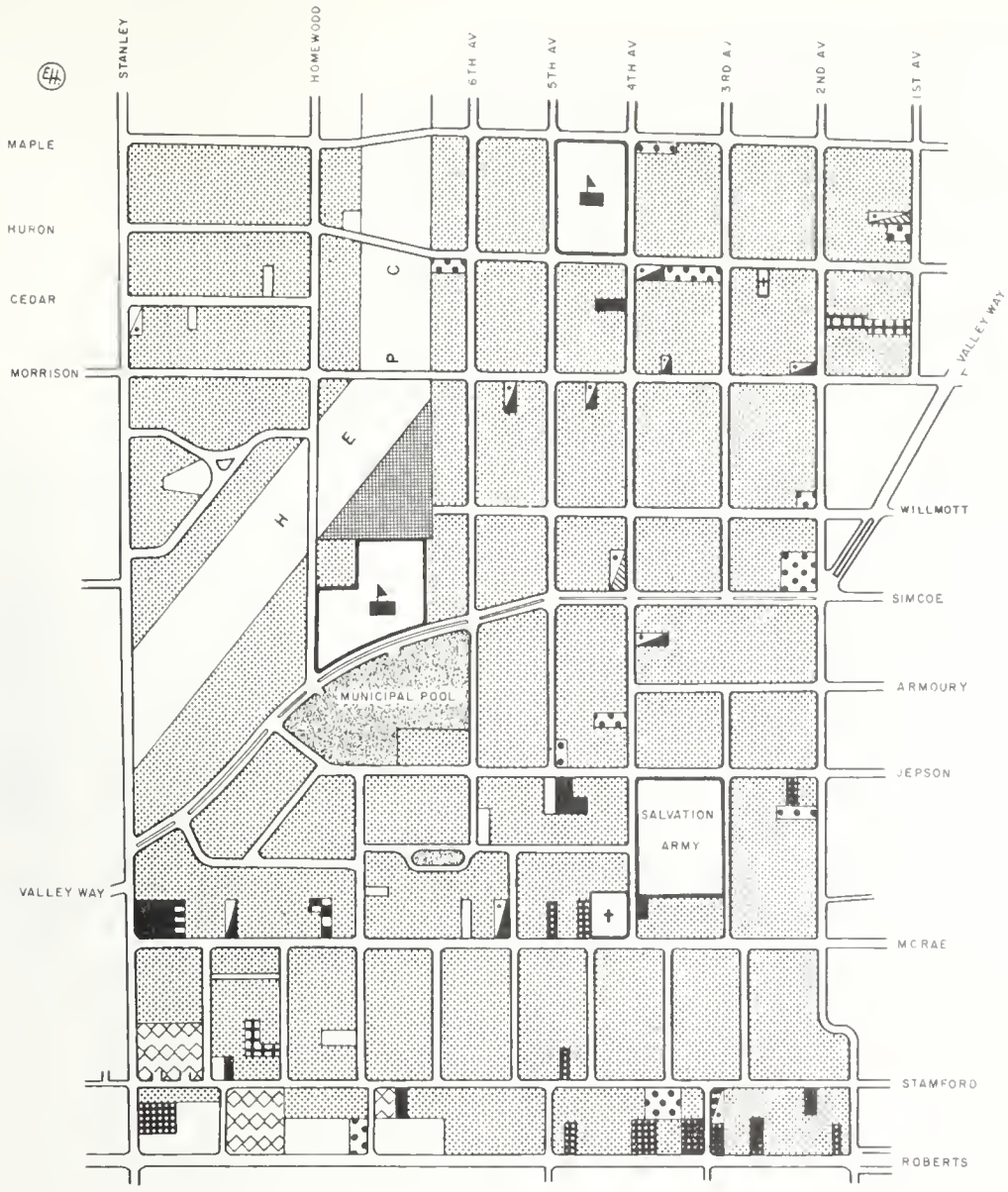
Classification	No. of Structures	Percentage
Good	38	41
Fair	39	41
Poor	14	16
Very Poor	2	2
TOTAL	93	100

CONDITION OF RESIDENTIAL STRUCTURES

Classification	No. of Structures	Percentage
Good	31	39
Fair	35	44
Poor	13	16
Very Poor	1	1
TOTAL	80	100

SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

Lot Space:	2.95 acres
Percentage of Total Residential Land:	19.12%



EXISTING LAND USE

ILLUSTRATION

RESIDENTIAL
DETACHED, SEMI-DETACHED DUPLEX, ROWHOUSING
TRIPLEX, FOURPLEX APARTMENT BUILDING
TOURIST HOME
MOTEL
CLUB

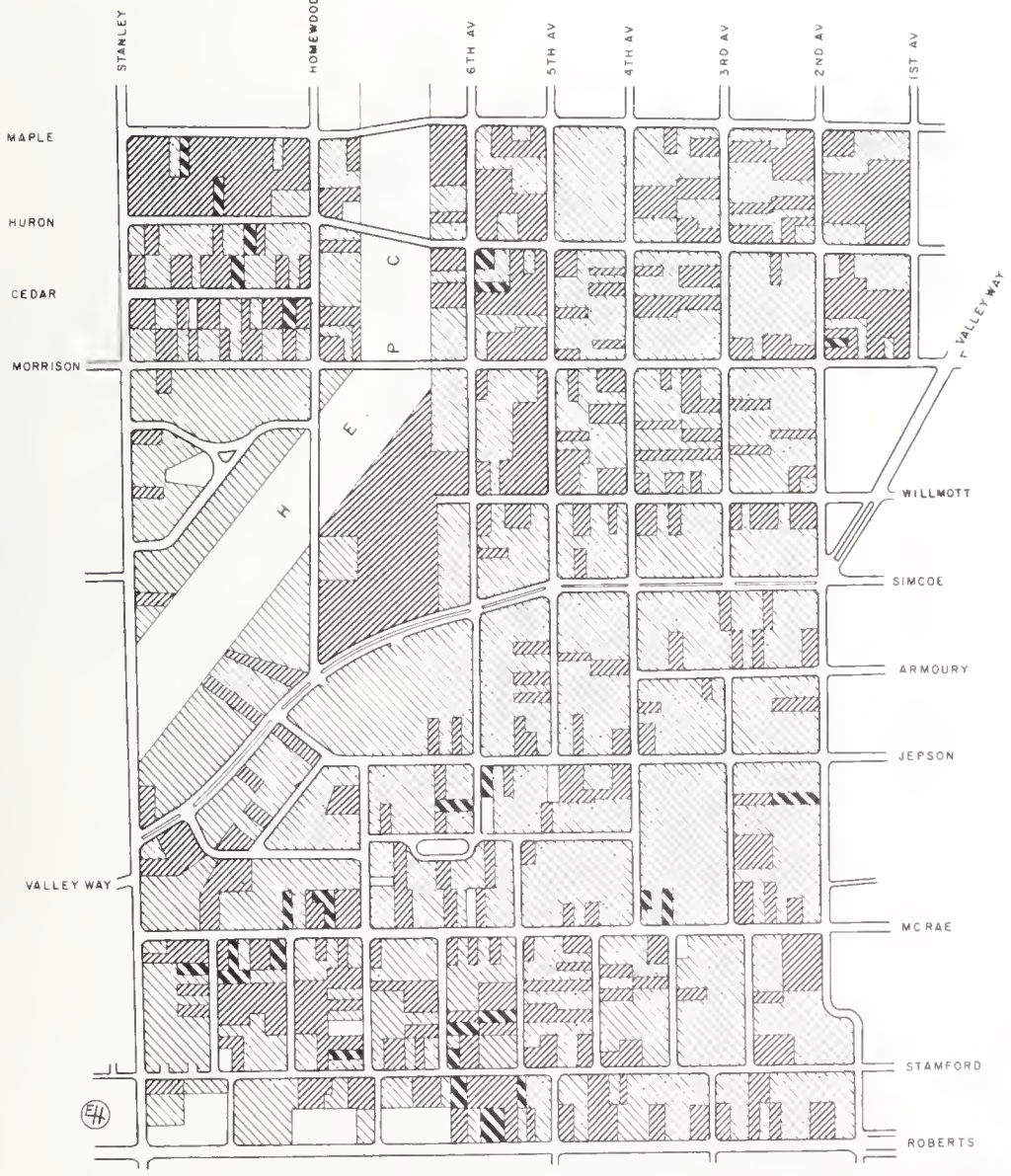
COMMERCIAL
RETAIL
OFFICE
WHOLESALE

INDUSTRIAL
MANUFACTURING
SERVICE
CHURCH
PUBLIC SCHOOL
PARK, PLAY GROUND
VACANT AND UNDEVELOPED LAND
MIXED USES

N

Scale 0 400 800 1200 Feet

Study Area 4



CONDITION OF BUILDINGS

ILLUSTRATION

GOOD
FAIR
POOR
VERY POOR
LAND WITHOUT BUILDINGS

STUDY AREA NO. 5

CLASSIFICATION OF LAND USES

TYPE OF USE	% of Total Present Acreage	Present Acreage
Residential—Single Family	54.22	10.3
Residential—Multiple Dwellings	.61	.1
Motels - Hotels	—	—
Commercial Retail	.33	.05
Commercial Offices	1.01	.2
Private Clubs	—	—
Warehousing	—	—
Wholesaling	—	—
Manufacturing	34.19	6.5
Service Industries	.23	.1
Institutions	—	—
Government and Utilities	—	—
Parks	3.55	.7
Transportation (Railways)	4.08	.8
Residential Streets	12.73	2.4
Non-Residential Streets	16.79	3.2
Vacant Land	163.35	31.1
Agriculture	222.73	42.3
Transport Co.	11.38	2.2

Total Acreage of Study Area:	525.20
Population of Study Area:	650
Present Acreage Per 1000 Persons:	84
Present Gross Density of Population:	1.2 pers/acr.
Present Net Density of Population:	12 pers/acr.

CONDITION OF ALL STRUCTURES

Classification	No. of Structures	Percentage
Good	41	21
Fair	98	49
Poor	55	27
Very Poor	6	3
TOTAL	200	100

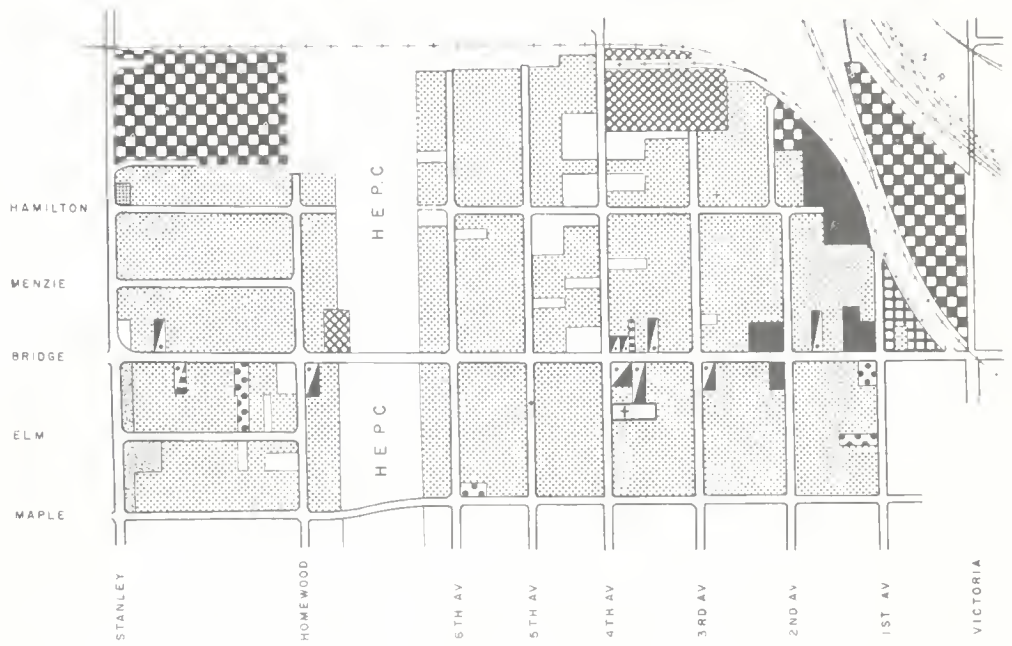
CONDITION OF RESIDENTIAL STRUCTURES

Classification	No. of Structures	Percentage
Good	35	20
Fair	89	50
Poor	48	28
Very Poor	4	2
TOTAL	176	100

SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

Lot Space:	18.62 acres
Percentage of Total Residential Land:	33.96%

RESIDENTIAL
DETACHED, SEMI-DETACHED DUPLEX, ROWHOUSING
TRIPLEX, FOURPLEX APARTMENT BUILDING
COMMERCIAL
RETAIL
WHOLESALE
WAREHOUSE
INDUSTRIAL
MANUFACTURING
SERVICE
CHURCH
PARK, PLAY GROUND
VACANT AND UNDEVELOPED LAND
MIXED USES



EXISTING LAND USE

ILLUSTRATION

N

Scale 0 400 800 1200 Feet

Study Area 5

GOOD
FAIR
POOR
VERY POOR
LAND WITHOUT BUILDINGS

CONDITION OF BUILDINGS

ILLUSTRATION

STUDY AREA NO. 6

CLASSIFICATION OF LAND USES

TYPE OF USE	Present Acreage	% of Total Present Acreage
Residential—Single Family	89.15	28.17
Residential—Multiple Dwellings	0.53	.17
Motels - Hotels	1.15	.36
Commercial Retail	5.23	1.65
Commercial Offices	2.64	.83
Private Clubs	1.80	.57
Warehousing	.52	.17
Wholesaling	.34	.11
Manufacturing	6.54	2.07
Service Industries	2.79	.88
Institutions	33.82	10.69
Government and Utilities	4.84	1.53
Parks	24.17	7.64
Transportation	—	—
Residential Streets	27.93	8.83
Non-Residential Streets	5.36	1.69
Vacant Land	22.03	6.96
Agriculture	38.89	12.29
Railways	.62	.19
H.E.P.C.	48.13	15.20

Total Acreage of Study Area:	316.48
Population of Study Area:	2323
Present Acreage Per 1000 Persons:	39
Present Gross Density of Population:	7 pers/acr.
Present Net Density of Population:	26 pers/acr.

CONDITION OF ALL STRUCTURES

Classification	No. of Structures	Percentage
Good	524	80
Fair	107	17
Poor	18	2
Very Poor	7	1
TOTAL	656	100

CONDITION OF RESIDENTIAL STRUCTURES

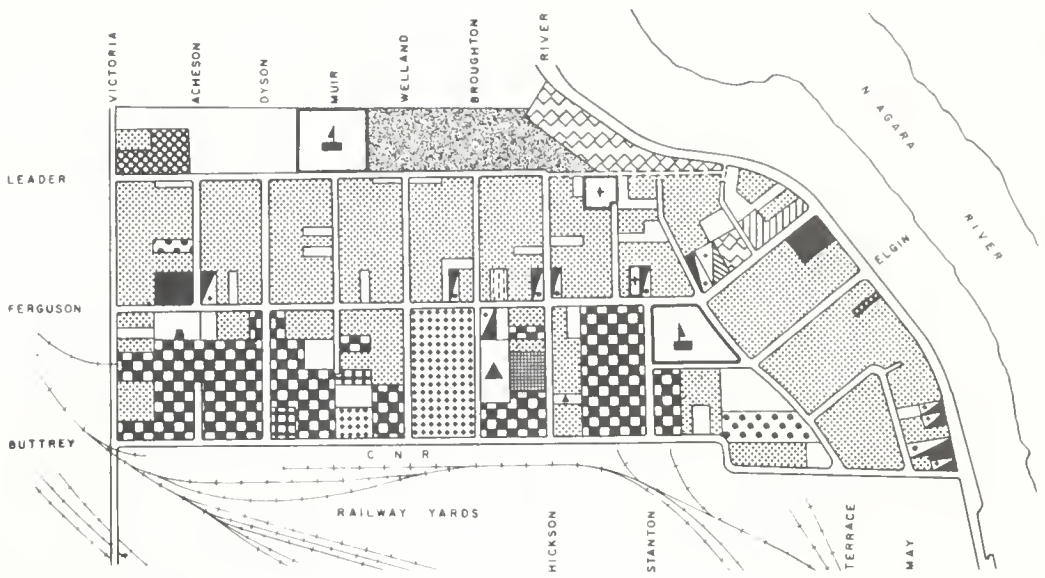
Classification	No. of Structures	Percentage
Good	497	80
Fair	102	17
Poor	16	2
Very Poor	7	1
TOTAL	622	100

SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

Lot Space:	3.07 acres
Percentage of Total Residential Land:	3.42%

RESIDENTIAL
DETACHED, SEMI-DETACHED OUPLEX, ROWHOUSING
TRIPLEX, FOURPLEX APARTMENT BUILDING
TOURIST HOME
MOTEL
HOTEL
CLUB

COMMERCIAL
RETAIL
OFFICE
WHOLESALE
WAREHOUSE
PARKING
MANUFACTURING INDUSTRY
TRANSPORTATION
CHURCH
SCHOOLS
PUBLIC
SEPARATE
GOVERNMENT BUILDINGS PUBLIC UTILITIES
PARK, PLAY GROUND
VACANT AND UNDEVELOPED LAND
MIXED USES



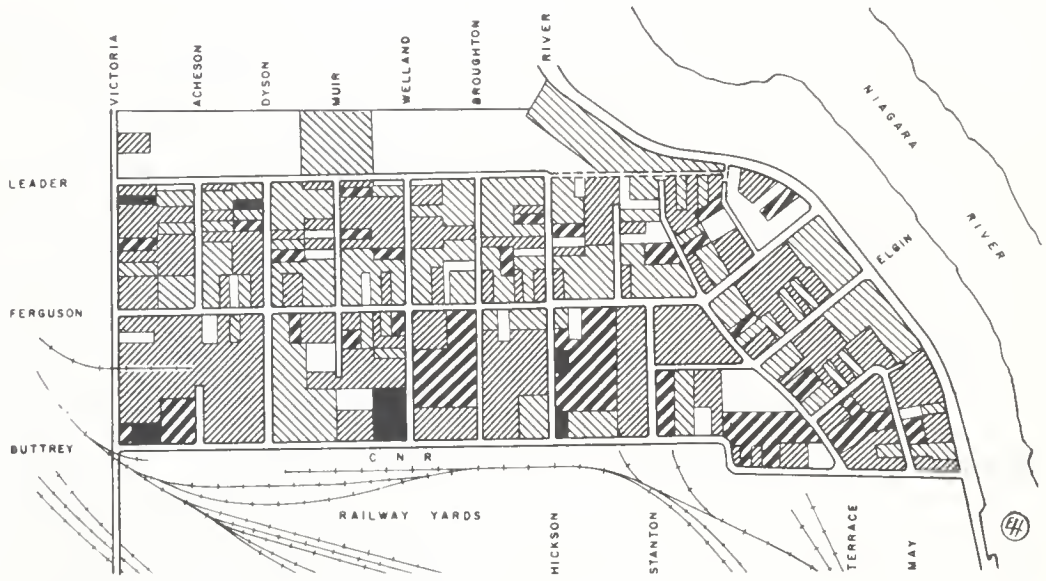
EXISTING LAND USE
ILLUSTRATION

N

Scale 0 400 800 1200 Feet

Study Area 6

GOOD
FAIR
POOR
VERY POOR
LAND WITHOUT BUILDINGS

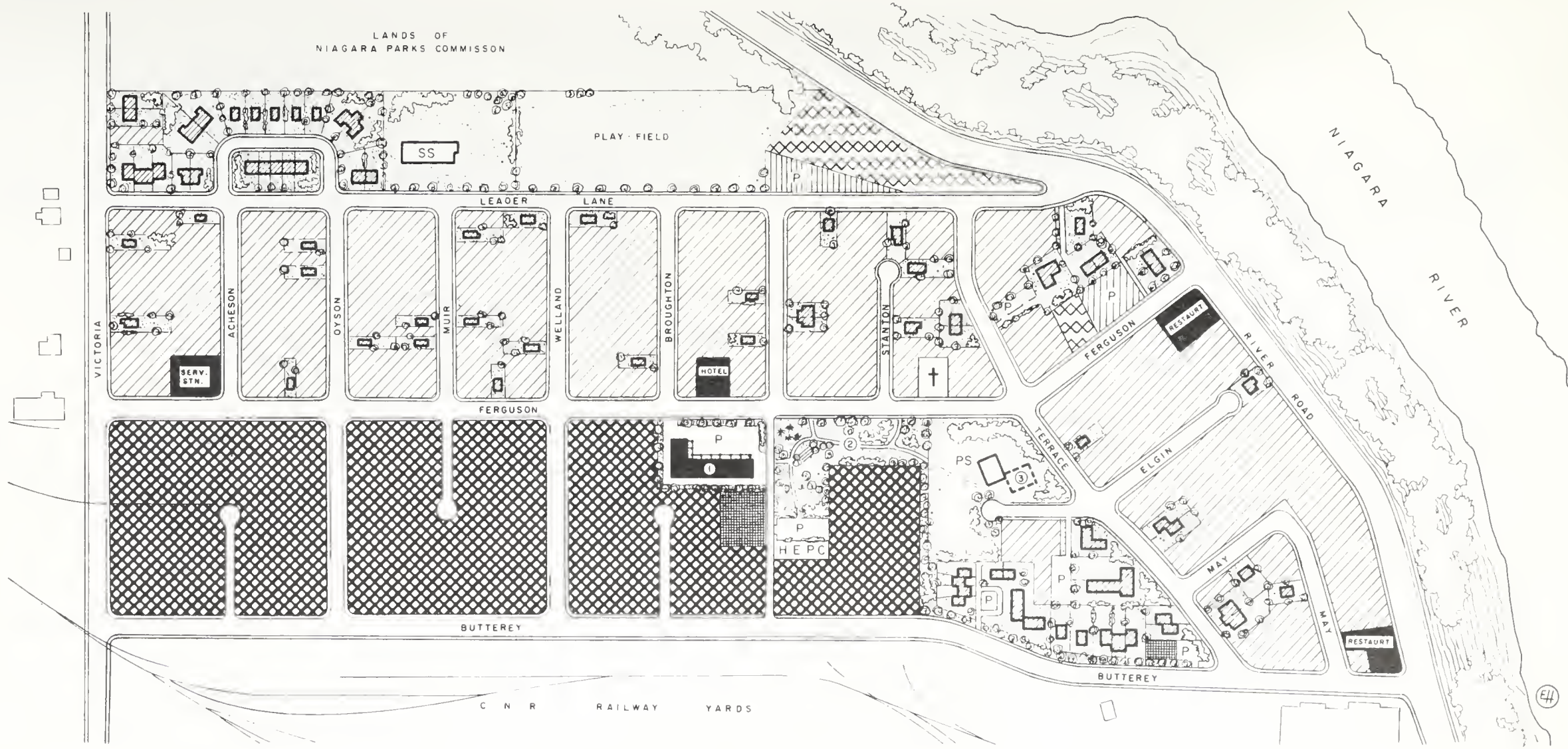


CONDITION OF BUILDINGS
ILLUSTRATION

THE GLENVIEW DISTRICT

(Study Area No. 6)

This area is envisaged as a self-contained neighbourhood. It is an old district which is physically and functionally separated from the rest of the community by definite "barriers" that could not, realistically, be eliminated. The suggested treatment would achieve the clearance of the poorest structures, to be replaced mainly by higher density housing to accommodate families with children. The provision of neighbourhood facilities, such as a shopping centre, parks and school playgrounds, has received particular attention. Another renewal objective in this district should be a more rational re-grouping of industrial uses. The cross-hatching represents the latter, while commercial uses are indicated in black.



N

Scale 0 200 400 600 Feet

GEORGES POTVIN & ASSOCIATES
LAND USE CONSULTANTS
1961

STUDY AREA NO. 7

CLASSIFICATION OF LAND USES

TYPE OF USE	Present Acreage	% of Total Present Acreage
Residential—Single Family	92.10	16.34
Residential—Multiple Dwellings	.47	.08
Motels - Hotels	—	—
Commercial Retail	19.19	3.40
Commercial Offices	26.02	4.63
Private Clubs	—	—
Warehousing	—	—
Wholesaling	1.20	.21
Manufacturing	21.52	3.81
Service Industries	.22	.03
Institutions	19.05	3.37
Government and Utilities	—	—
Parks	.48	.08
Transportation	—	—
Residential Streets	25.68	4.55
Non-Residential Streets	47.03	8.35
Vacant Land	9.20	1.63
Agriculture	240.20	42.60
H.E.P.C.	42.47	7.53
Railways	19.17	3.39

Total Acreage of Study Area:	564.00
Population of Study Area:	1424
Present Acreage Per 1000 Persons:	65
Present Gross Density of Population:	2.5 pers/acr.
Present Net Density of Population:	15 pers/acr.

CONDITION OF ALL STRUCTURES

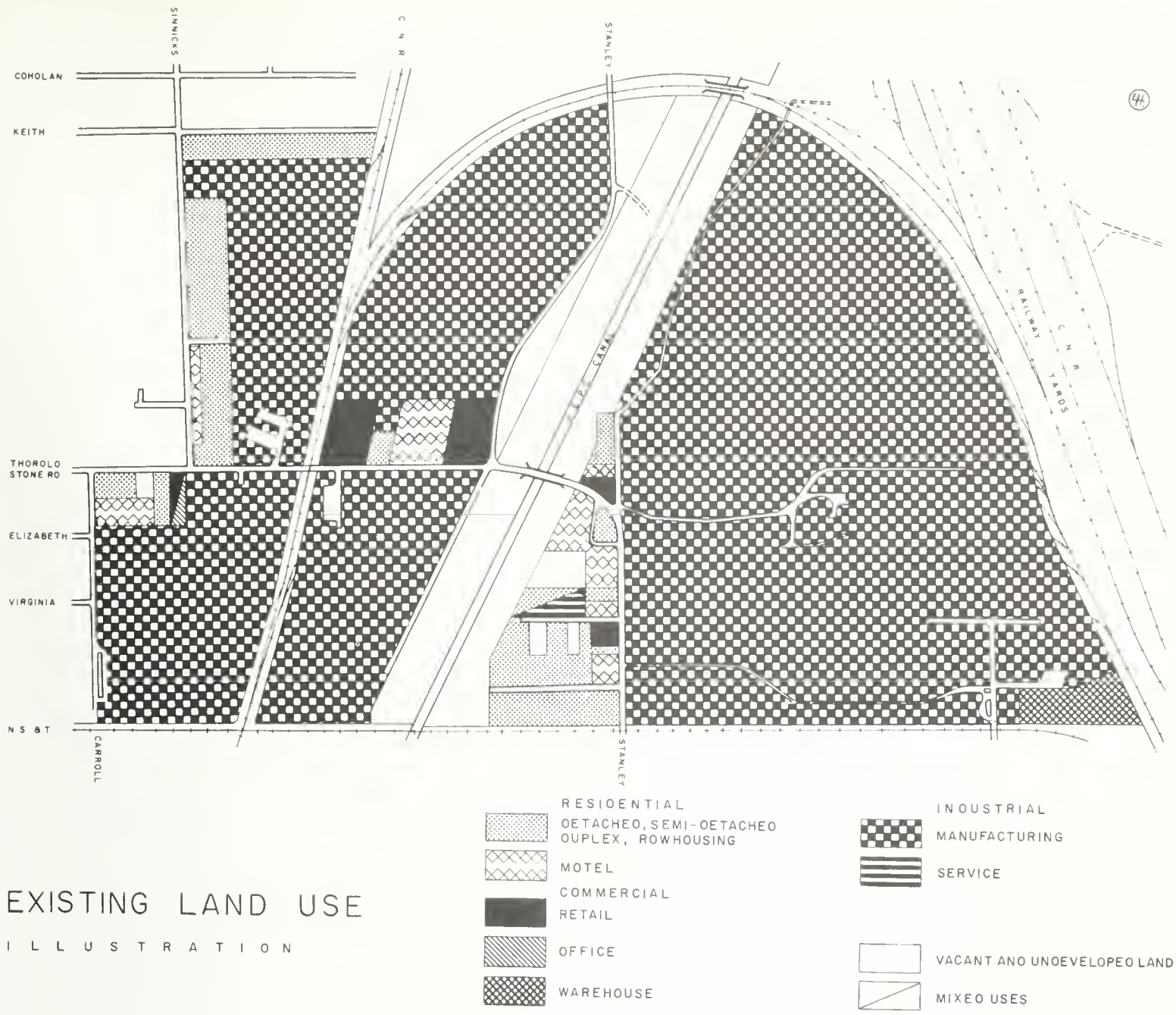
Classification	No. of Structures	Percentage
Good	385	88.32
Fair	38	9.32
Poor	10	2.13
Very Poor	1	.23
TOTAL	434	100.00

CONDITION OF RESIDENTIAL STRUCTURES

Classification	No. of Structures	Percentage
Good	364	91.17
Fair	30	7.20
Poor	8	1.39
Very Poor	1	.24
TOTAL	403	100.00

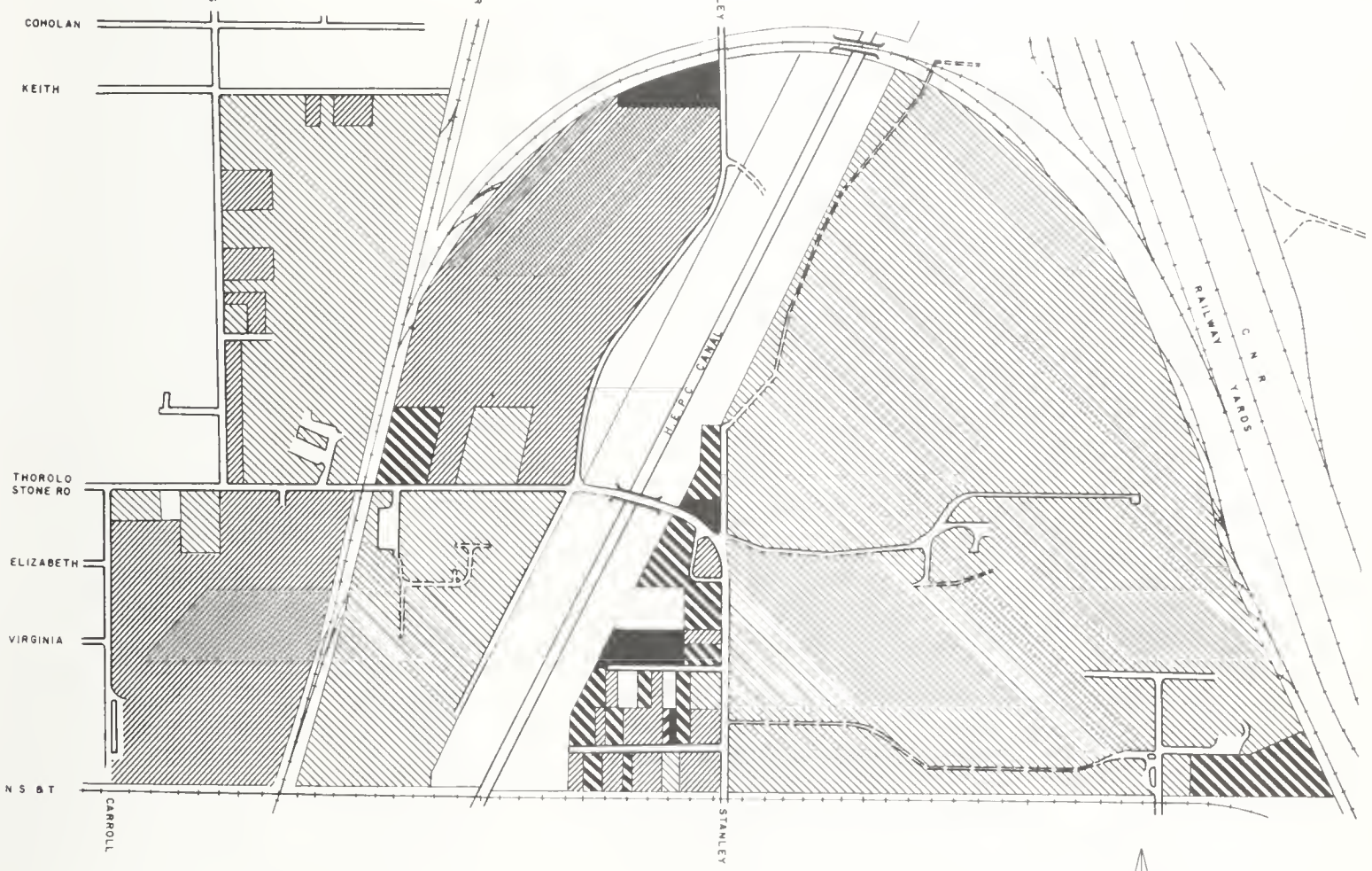
SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

Lot Space:	2.10 acres
Percentage of Total Residential Land:	2.27%



EXISTING LAND USE

ILLUSTRATION



CONDITION OF BUILDINGS

ILLUSTRATION

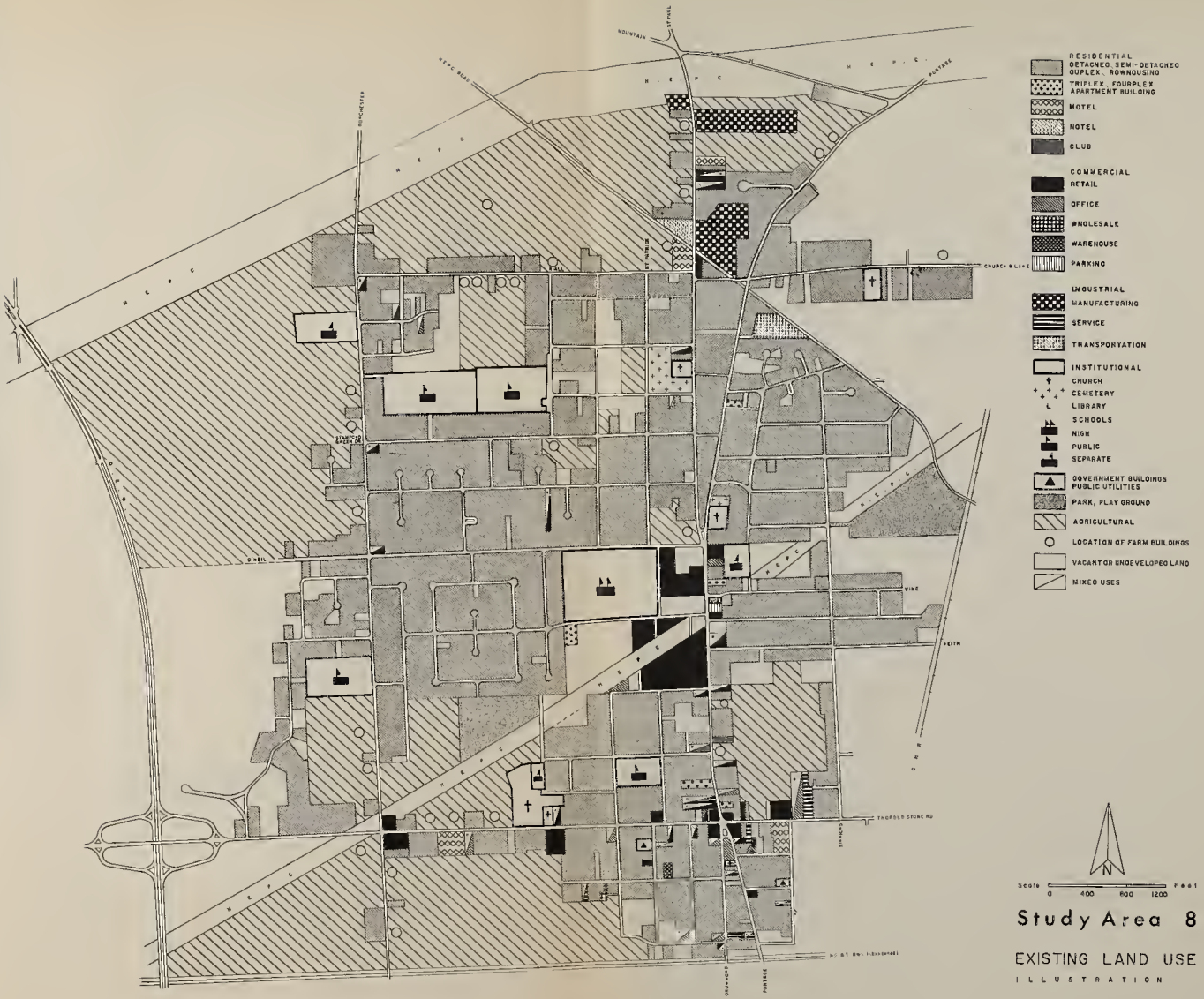
Study Area 7

STUDY AREA NO. 8

CLASSIFICATION OF LAND USES

TYPE OF USE	Present Acreage	% of Total Present Acreage
Residential—Single Family	473.00	45.57
Residential—Multiple Dwellings	18.92	1.82
Motels - Hotels	15.95	1.53
Commercial Retail	22.11	2.12
Commercial Offices	4.34	.49
Private Clubs	.42	.04
Warehousing	.28	.02
Wholesaling	.45	.04
Manufacturing	5.47	.52
Service Industries	1.15	.11
Institutions	61.70	5.93
Government and Utilities	3.34	.32
Parks	16.77	1.61
Transportation	4.04	.38
Residential Streets	184.07	17.72
Non-Residential Streets	25.42	2.44
Vacant Land	29.44	2.83
Agriculture	73.02	7.03
H.E.P.C.	98.50	9.48

Total Acreage of Study Area:	1038.39
Population of Study Area:	10956
Present Acreage Per 1000 Persons:	45
Present Gross Density of Population:	10 pers/acr.
Present Net Density of Population:	22 pers/acr.



Study Area 8

EXISTING LAND USE

ILLUSTRATION

CONDITION OF ALL STRUCTURES

Classification	No. of Structures	Percentage
Good	1405	57.38
Fair	1061	35.35
Poor	204	6.44
Very Poor	18	.83
TOTAL	2988	100.00

CONDITION OF RESIDENTIAL STRUCTURES

Classification	No. of Structures	Percentage
Good	1602	58.42
Fair	965	35.08
Poor	165	6.00
Very Poor	14	.50
TOTAL	2746	100.00

SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

Lot Space:	25.63 acres
Percentage of Total Residential Land:	5.21%

Study Area 8

CONDITION OF BUILDINGS

ILLUSTRATION

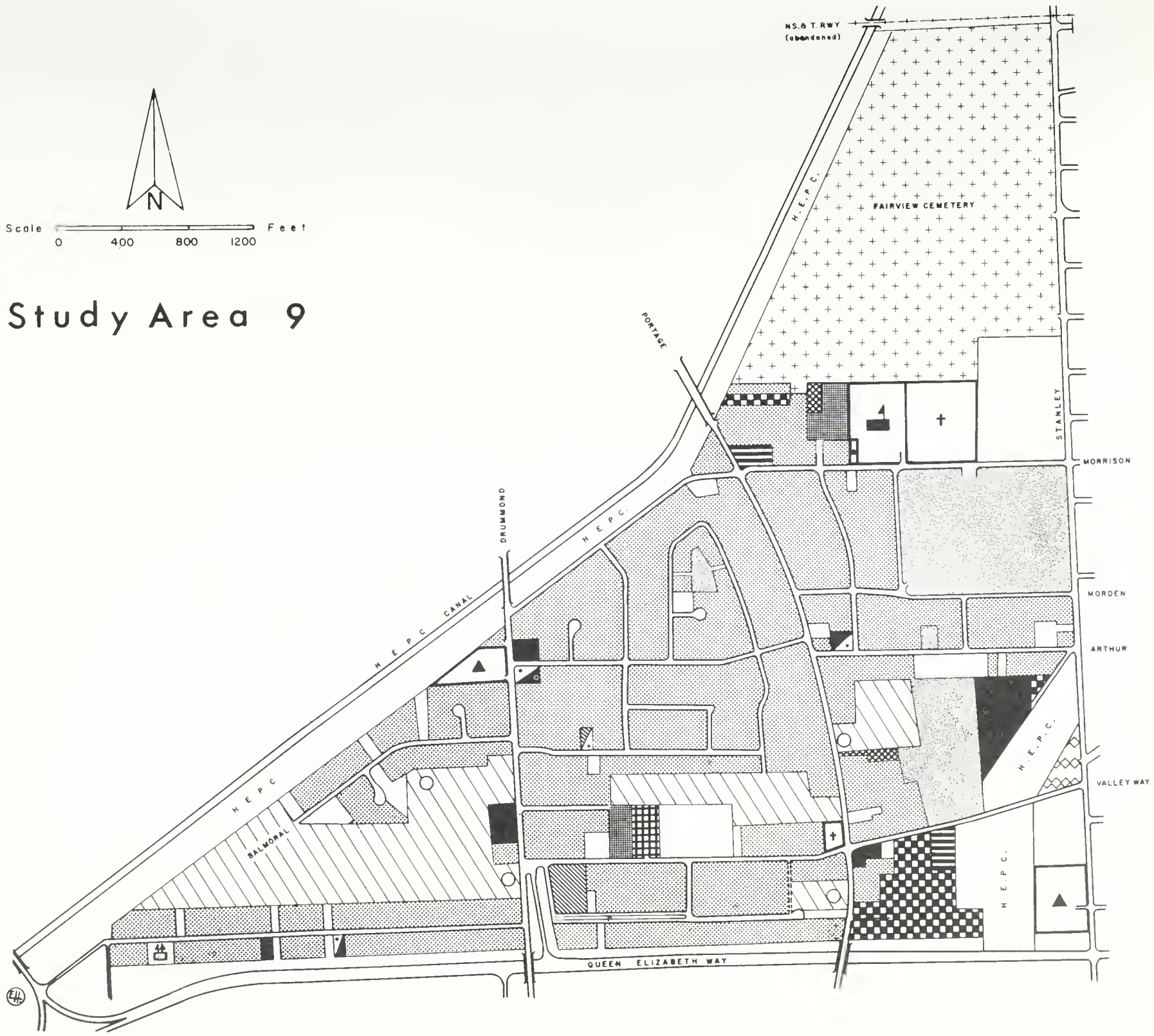
STUDY AREA NO. 9

CLASSIFICATION OF LAND USES

TYPE OF USE	Present Acreage	% of Total Present Acreage
Residential—Single Family	247.87	25.49
Residential—Multiple Dwellings	.33	.02
Motels - Hotels	13.11	1.34
Commercial Retail	12.75	1.30
Commercial Offices	.02	—
Private Clubs	—	—
Warehousing	—	—
Wholesaling	—	—
Manufacturing	—	—
Service Industries	.03	—
Institutions	46.73	4.78
Government and Utilities	.38	.03
Parks	19.89	2.03
Transportation	1.00	.01
Residential Streets	149.69	15.32
Non-Residential Streets	11.51	1.17
Vacant Land	228.11	23.36
Agriculture	191.97	19.64
H.E.P.C.	53.83	5.50
Railways	.17	.01

Total Acreage of Study Area:	977.39
Population of Study Area:	5913
Present Acreage Per 1000 Persons:	42
Present Gross Density of Population:	6.0 pers/acr.
Present Net Density of Population:	24 pers/acr.

Study Area 9



RESIDENTIAL
DETACHED, SEMI-DETACHED
DUPLEX, ROWHOUSING
MOTEL
CLUB
COMMERCIAL
RETAIL
OFFICE
WHOLESALE
WAREHOUSE
INDUSTRIAL
MANUFACTURING
SERVICE
INSTITUTIONAL
CHURCH
CEMETERY
SEPARATE SCHOOL
GOVERNMENT BUILDINGS
PUBLIC UTILITIES
PARK, PLAY GROUND
AGRICULTURAL
LOCATION OF FARM BUILDINGS
VACANT OR UNDEVELOPED LAND
MIXED USES

EXISTING LAND USE
ILLUSTRATION

CONDITION OF ALL STRUCTURES

Classification	No. of Structures	Percentage
Good	948	60.50
Fair	472	29.35
Poor	145	9.52
Very Poor	10	.63
TOTAL	1575	100.00

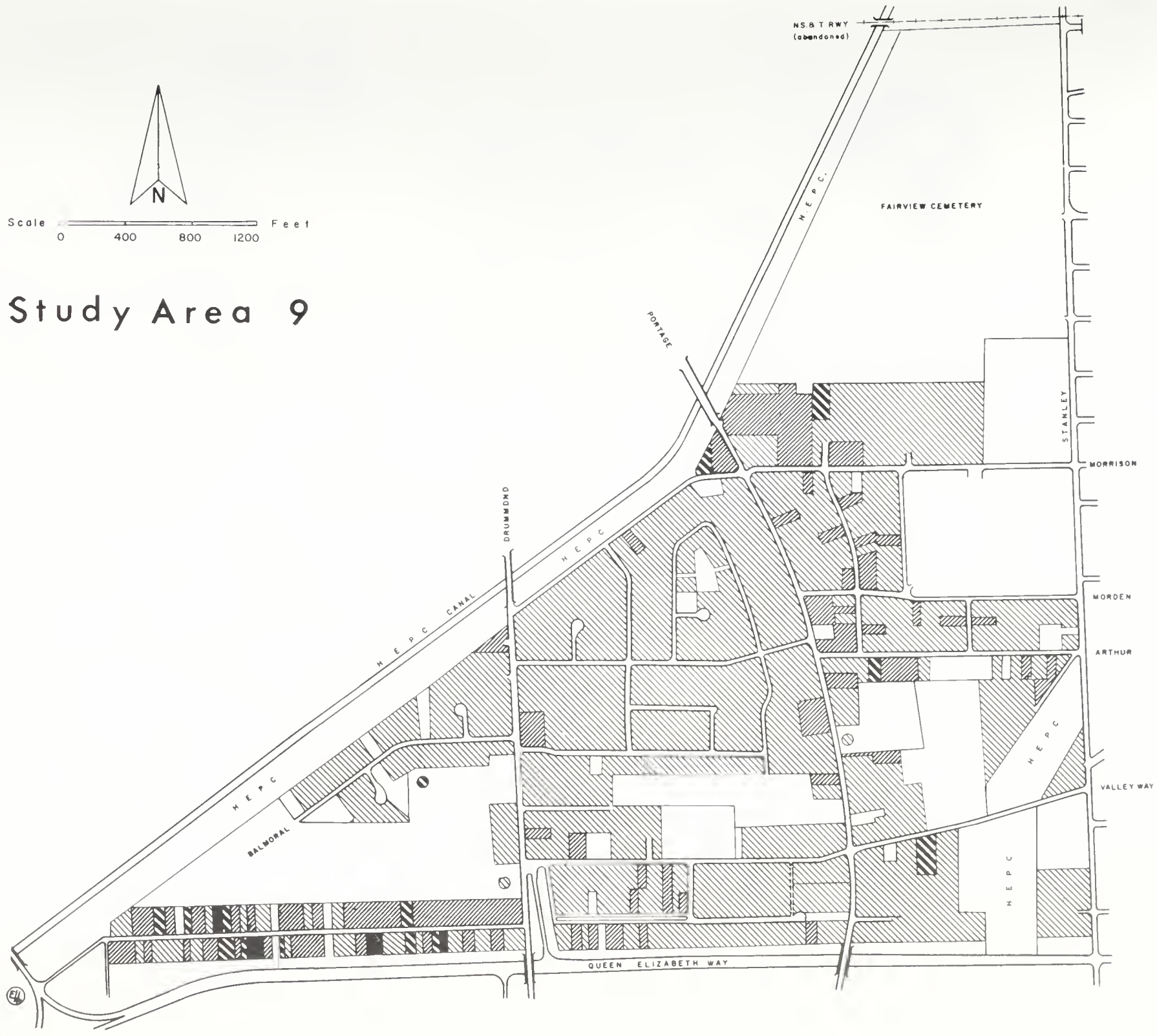
CONDITION OF RESIDENTIAL STRUCTURES

Classification	No. of Structures	Percentage
Good	915	60.60
Fair	455	29.16
Poor	137	9.59
Very Poor	10	.65
TOTAL	1517	100.00

SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

Lot Space:	23.52 acres
Percentage of Total Residential Land:	9.48%

Study Area 9



GOOD

FAIR

POOR

VERY POOR

LAND WITHOUT BUILDINGS

CONDITION OF BUILDINGS

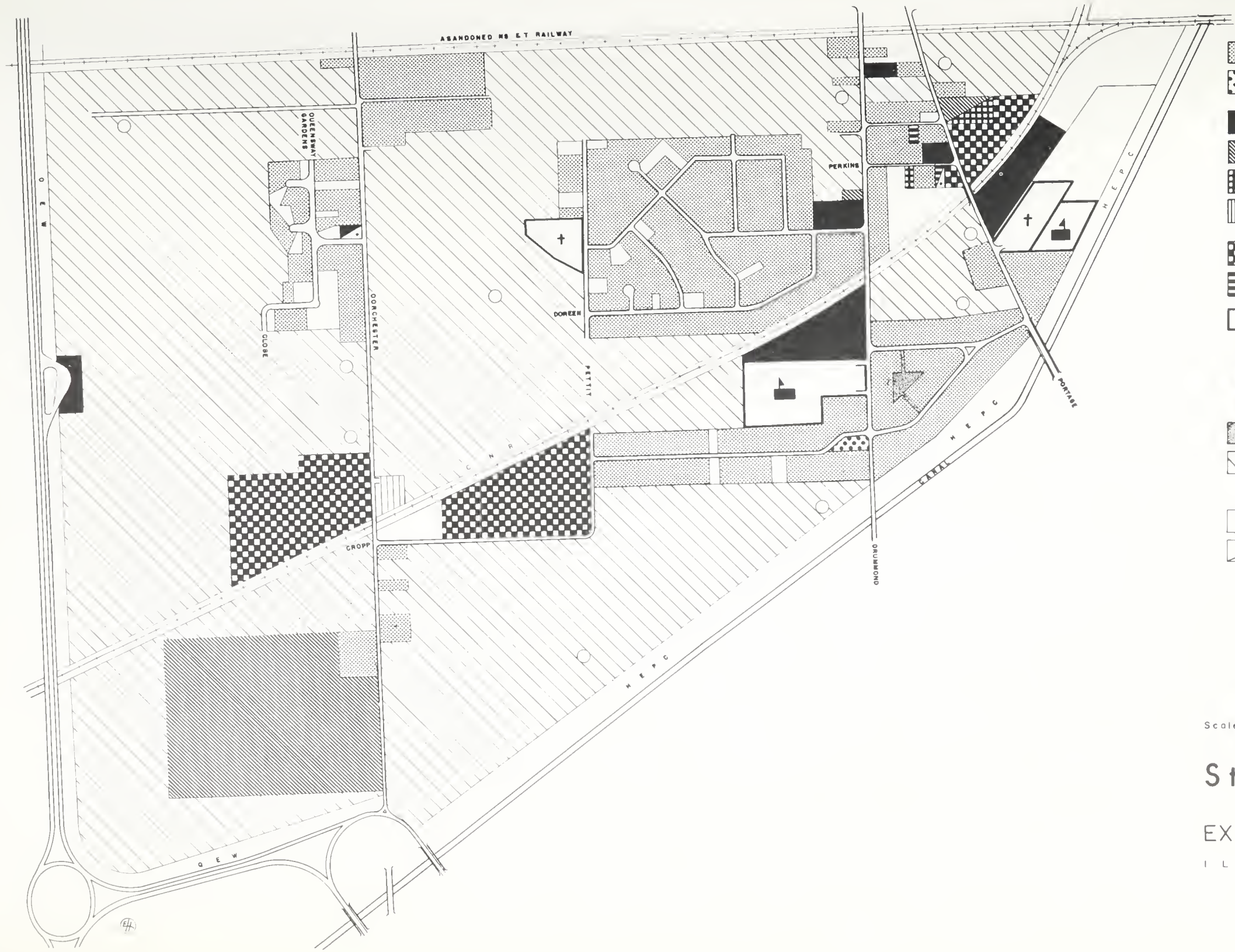
ILLUSTRATION

STUDY AREA NO. 10

CLASSIFICATION OF LAND USES

TYPE OF USE	Present Acreage	% of Total Present Acreage
Residential—Single Family	72.47	37.14
Residential—Multiple Dwellings	4.23	2.21
Motels - Hotels	7.42	3.13
Commercial Retail	3.50	1.14
Commercial Offices	.61	.30
Private Clubs	.80	.39
Warehousing	1.99	.99
Wholesaling	.98	.48
Manufacturing	19.56	9.75
Service Industries	1.48	.73
Institutions	5.31	2.64
Government and Utilities	1.20	.59
Parks	—	—
Transportation (Railways)	4.27	2.12
Residential Streets	37.37	18.61
Non-Residential Streets	16.54	8.23
Vacant Land	16.02	7.97
Agriculture	—	—
H.E.P.C.	5.79	2.88
Open Spaces	1.42	.70

Total Acreage of Study Area:	200.96
Population of Study Area:	2901
Present Acreage Per 1000 Persons:	26
Present Gross Density of Population:	14 pers/acr.
Present Net Density of Population:	38 pers/acr.



RESIDENTIAL
DETACHED, SEMI-DETACHED DUPLEX, ROWHOUSING
TRIPLEX, FOURPLEX APARTMENT BUILDING
COMMERCIAL
RETAIL
OFFICE
WHOLESALE
PARKING
INDUSTRIAL
MANUFACTURING
SERVICE
INSTITUTIONAL
CHURCH
SCHOOLS
PUBLIC
SEPARATE
PARK, PLAY GROUND
AGRICULTURAL
LOCATION OF FARM BUILDINGS
VACANT OR UNDEVELOPED LAND
MIXED USES

N

Scale 0 400 800 1200 Feet

Study Area 10

EXISTING LAND USE

ILLUSTRATION

CONDITION OF ALL STRUCTURES

Classification	No. of Structures	Percentage
Good	163	26
Fair	386	58
Poor	99	15
Very Poor	10	1
TOTAL	658	100

CONDITION OF RESIDENTIAL STRUCTURES

Classification	No. of Structures	Percentage
Good	142	26
Fair	314	58
Poor	84	15
Very Poor	9	1
TOTAL	552	100

SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

Lot Space:	14.76 acres.
Percentage of Total Residential Land:	19.24%

Study Area 10

CONDITION OF BUILDINGS

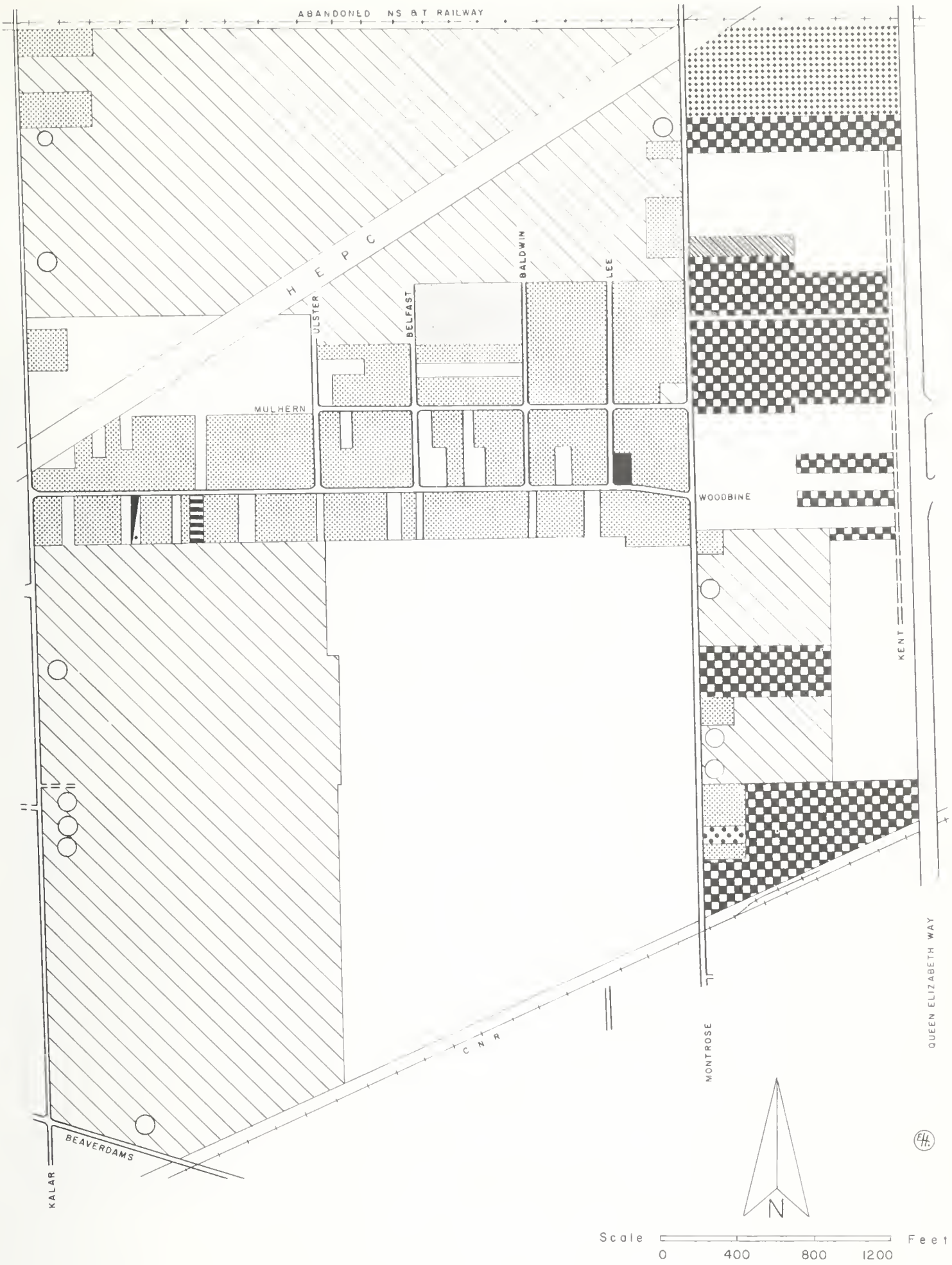
ILLUSTRATION

STUDY AREA NO. 11

CLASSIFICATION OF LAND USES

TYPE OF USE	Present Acreage	% of Total Present Acreage
Residential—Single Family	94.94	46.71
Residential—Multiple Dwellings	4.07	2.00
Motels - Hotels	.22	.10
Commercial Retail	1.49	.74
Commercial Offices	.14	.6
Private Clubs	—	—
Warehousing	.13	.6
Wholesaling	—	—
Manufacturing	2.84	1.40
Service Industries	.51	.25
Institutions	5.36	4.12
Government and Utilities	2.22	1.09
Parks	.48	.23
Transportation (Railways)	7.26	3.57
Residential Streets	48.67	23.95
Non-Residential Streets	23.94	11.78
Vacant Land	8.00	3.94
Agriculture	—	—
H.E.P.C.	—	—

Total Acreage of Study Area:	203.27
Population of Study Area:	3814
Present Acreage Per 1000 Persons:	26
Present Gross Density of Population:	1.9 pers/acr.
Present Net Density of Population:	39 pers/acr.



RESIDENTIAL

DETACHED, SEMI-DETACHED DUPLEX, ROWHOUSING

TRIPLEX, FOURPLEX APARTMENT BUILDING

COMMERCIAL

RETAIL

OFFICE

INDUSTRIAL

MANUFACTURING

SERVICE

TRANSPORTATION

PARK, PLAY GROUND

AGRICULTURAL

LOCATION OF FARM BUILDINGS

VACANT AND UNDEVELOPED LAND

MIXED USES

EXISTING LAND USE

ILLUSTRATION

Study Area 11

CONDITION OF ALL STRUCTURES

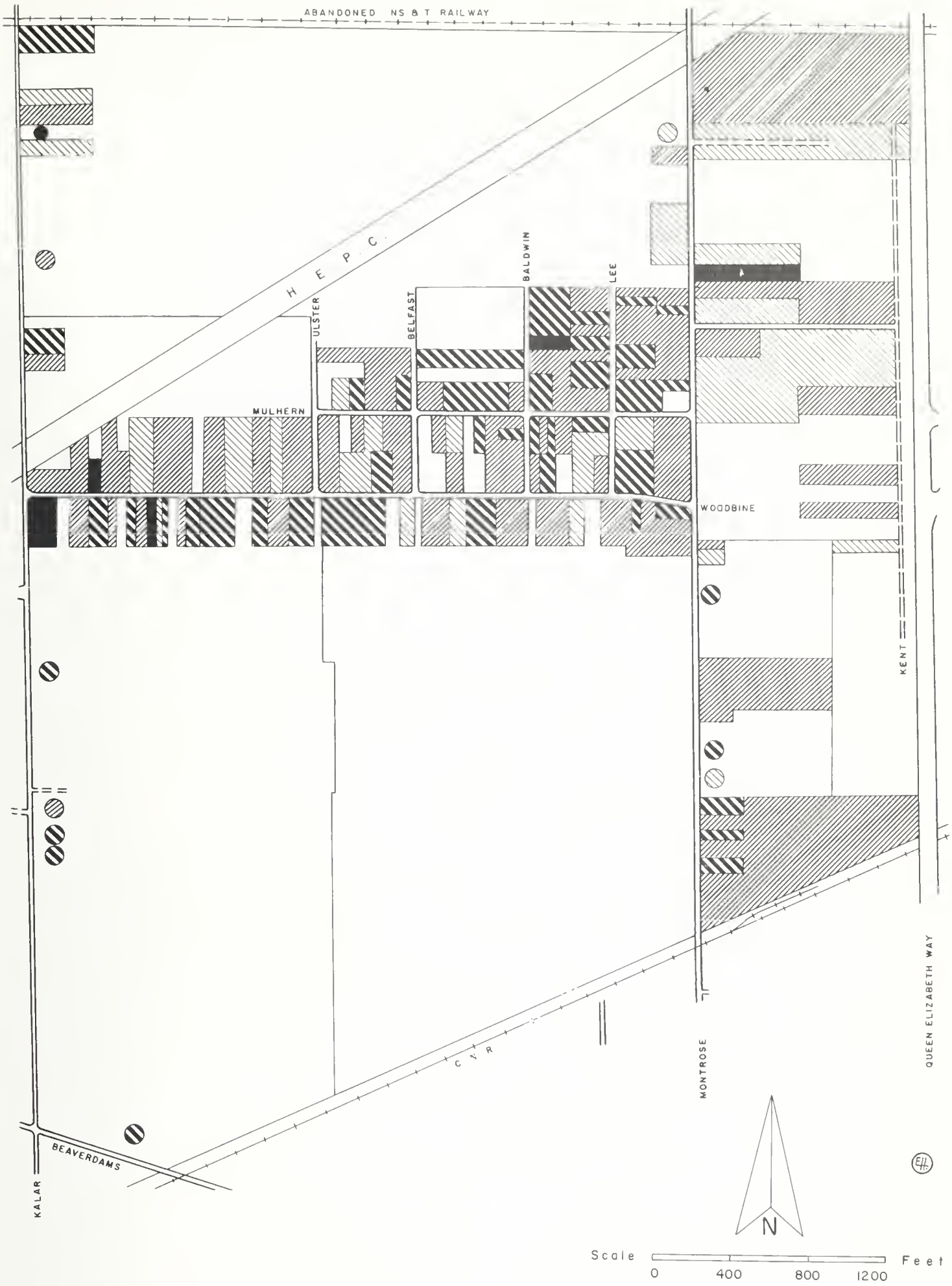
Classification	No. of Structures	Percentage
Good	428	46.7
Fair	420	45.8
Poor	62	6.7
Very Poor	5	0.8
TOTAL	915	100

CONDITION OF RESIDENTIAL STRUCTURES

Classification	No. of Structures	Percentage
Good	420	47.4
Fair	403	45.5
Poor	57	6.3
Very Poor	4	0.8
TOTAL	884	100

SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

Lot Space:	5.99 acres.
Percentage of Total Residential Land:	6.05%



CONDITION OF BUILDINGS

ILLUSTRATION

Study Area 11

THE WOODBINE DISTRICT

(Study Area No. 11)

This small area constitutes one of the best defined existing concentrations of poor and very poor structures. The accompanying plan suggests that these be eliminated and replaced mainly by an attractive mixture of maisonnettes, semi-detached and row houses.

N

Scale 0 200 400 600 Feet

GEORGES POTVIN & ASSOCIATES
LAND USE CONSULTANTS
1961

H.E.P.C.

AGRICULTURAL

AGRICULTURAL

PLAY FIELD

ULSTER

BELFAST

BALDWIN

LEE

MONTROSE

MULHERN

WOODBINE

KALAR

AGRICULTURAL

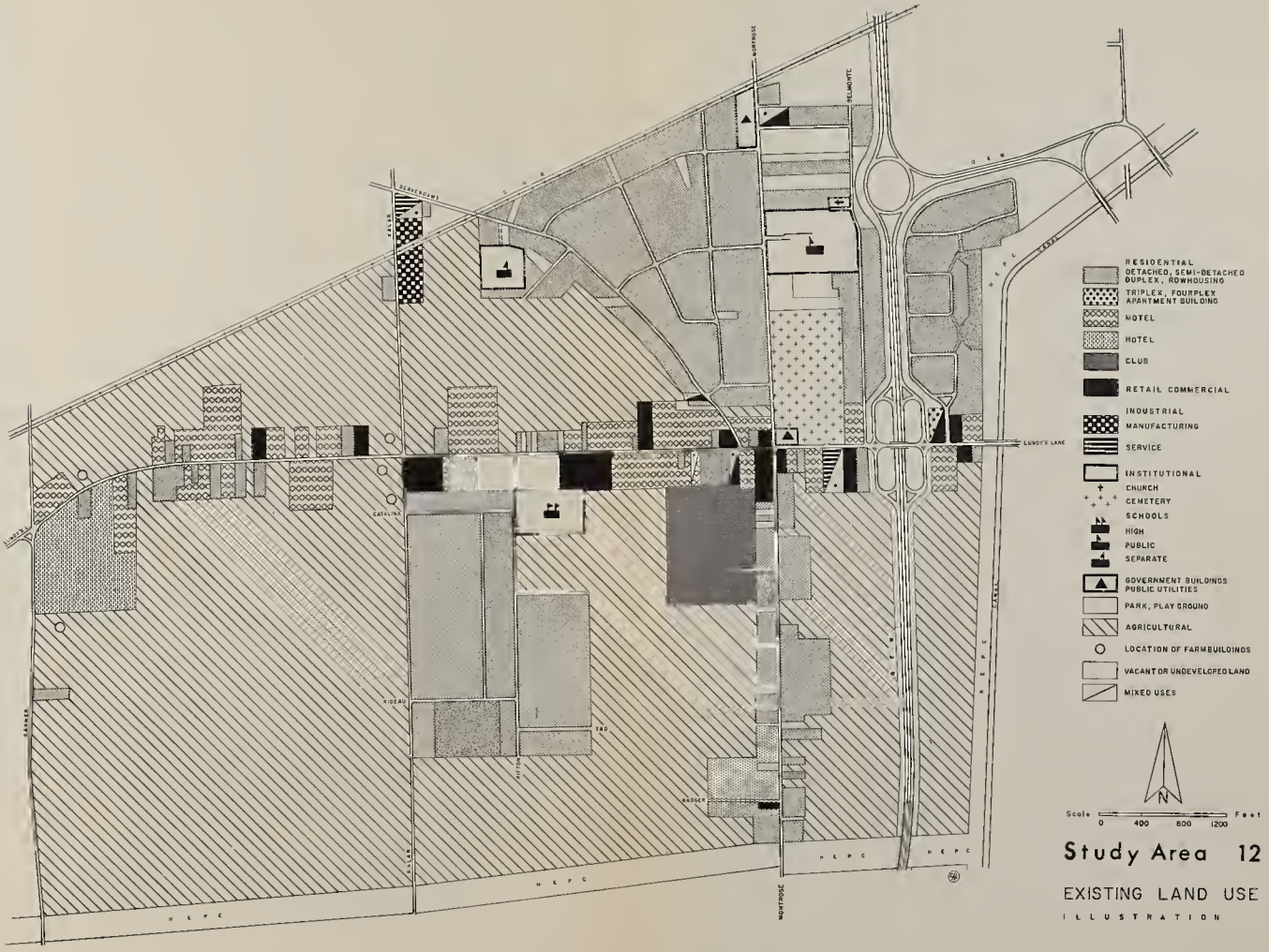
E44

STUDY AREA NO. 12

CLASSIFICATION OF LAND USES

TYPE OF USE	Present Acreage	% of Total Present Acreage
Residential—Single Family	61.14	29.90
Residential—Multiple Dwellings	4.00	1.97
Motels - Hotels	3.17	1.54
Commercial Retail	22.82	11.17
Commercial Offices	5.43	2.65
Private Clubs	1.78	.87
Warehousing	—	—
Wholesaling	1.00	.48
Manufacturing	2.64	1.29
Service Industries	1.34	.65
Institutions	7.41	3.48
Government and Utilities	4.82	2.35
Parks	8.63	4.21
Transportation	.56	.27
Residential Streets	18.32	8.95
Non-Residential Streets	29.29	14.33
Vacant Land	5.47	2.67
Agriculture	—	—
Parking	7.25	3.54
Railways	19.77	9.68

Total Acreage of Study Area: 204.57



Study Area 12

EXISTING LAND USE

ILLUSTRATION

CONDITION OF ALL STRUCTURES

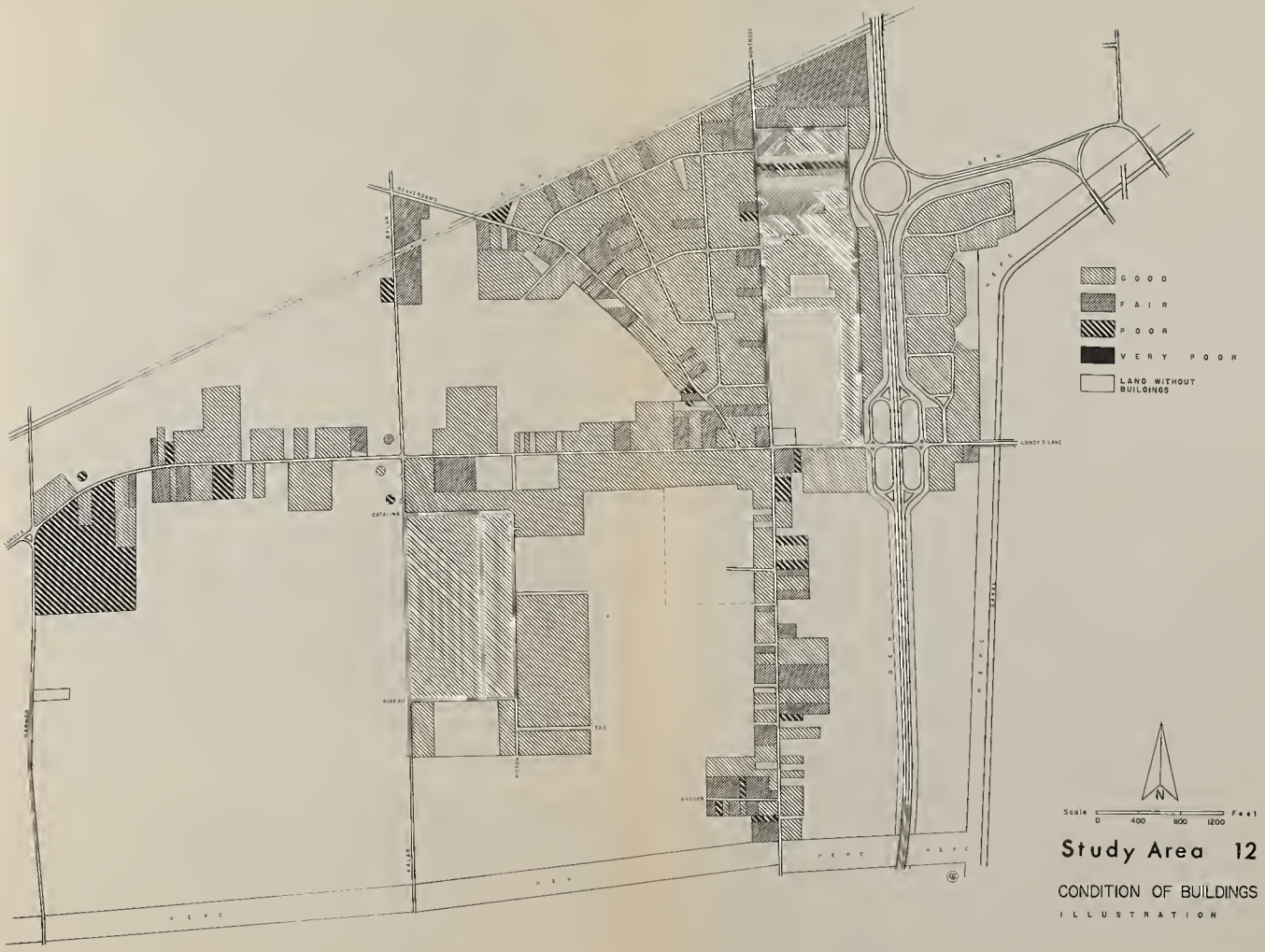
Classification	No. of Structures	Percentage
Good	529	56
Fair	328	34
Poor	92	9
Very Poor	19	1
TOTAL	968	100

CONDITION OF RESIDENTIAL STRUCTURES

Classification	No. of Structures	Percentage
Good	252	45
Fair	236	42
Poor	64	11
Very Poor	15	2
TOTAL	567	100

SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

Lot Space:	8.28 acres
Percentage of Total Residential Land:	12.71%



Study Area 12

CONDITION OF BUILDINGS

ILLUSTRATION

STUDY AREA NO. 13

CLASSIFICATION OF LAND USES

TYPE OF USE	Present Acreage	% of Total Present Acreage
Residential—Single Family	423.28	31.18
Residential—Multiple Dwellings	1.90	.14
Motels - Hotels	4.51	.33
Commercial Retail	20.60	1.52
Commercial Offices	1.63	.12
Private Clubs	.70	.05
Warehousing	.45	.03
Wholesaling	.19	.01
Manufacturing	19.52	1.44
Service Industries	1.78	.13
Institutions	52.72	3.89
Government and Utilities	.50	.03
Parks	25.31	1.87
Transportation	2.01	.14
Residential Streets	126.77	9.35
Non-Residential Streets	53.36	3.94
Vacant Land	138.01	10.17
Agriculture	410.99	30.29
Railways	8.61	.63
H.E.P.C.	64.28	4.74

Total Acreage of Study Area:	1357.12
Population of Study Area:	6665
Present Acreage Per 1000 Persons:	64
Present Gross Density of Population:	4.9 pers/acr.
Present Net Density of Population:	16 pers/acr.

RESIDENTIAL
- DETACHED, SEMI-DETACHED OUPLEX, ROWHOUSING
- TRIPLEX, FOURPLEX APARTMENT BUILDING
- TOURIST HOME
- MOTEL
- HOTEL
- CLUB

COMMERCIAL
- RETAIL
- OFFICE
- WAREHOUSE
- PARKING

INDUSTRIAL
- MANUFACTURING
- SERVICE

INSTITUTIONAL
- CHURCH
- CEMETERY
- HOSPITAL
- L LIBRARY
- Y YMCA, BOY SCOUTS
- SCHOOLS
- PUBLIC
- HIGH
- GOVERNMENT BUILDINGS PUBLIC UTILITIES
- PARK, PLAY GROUND
- VACANT OR UNDEVELOPED LAND
- MIXED USES

N

Scale 0 400 800 1200 Feet

Study Area 13

EXISTING LAND USE

ILLUSTRATION

CONDITION OF ALL STRUCTURES

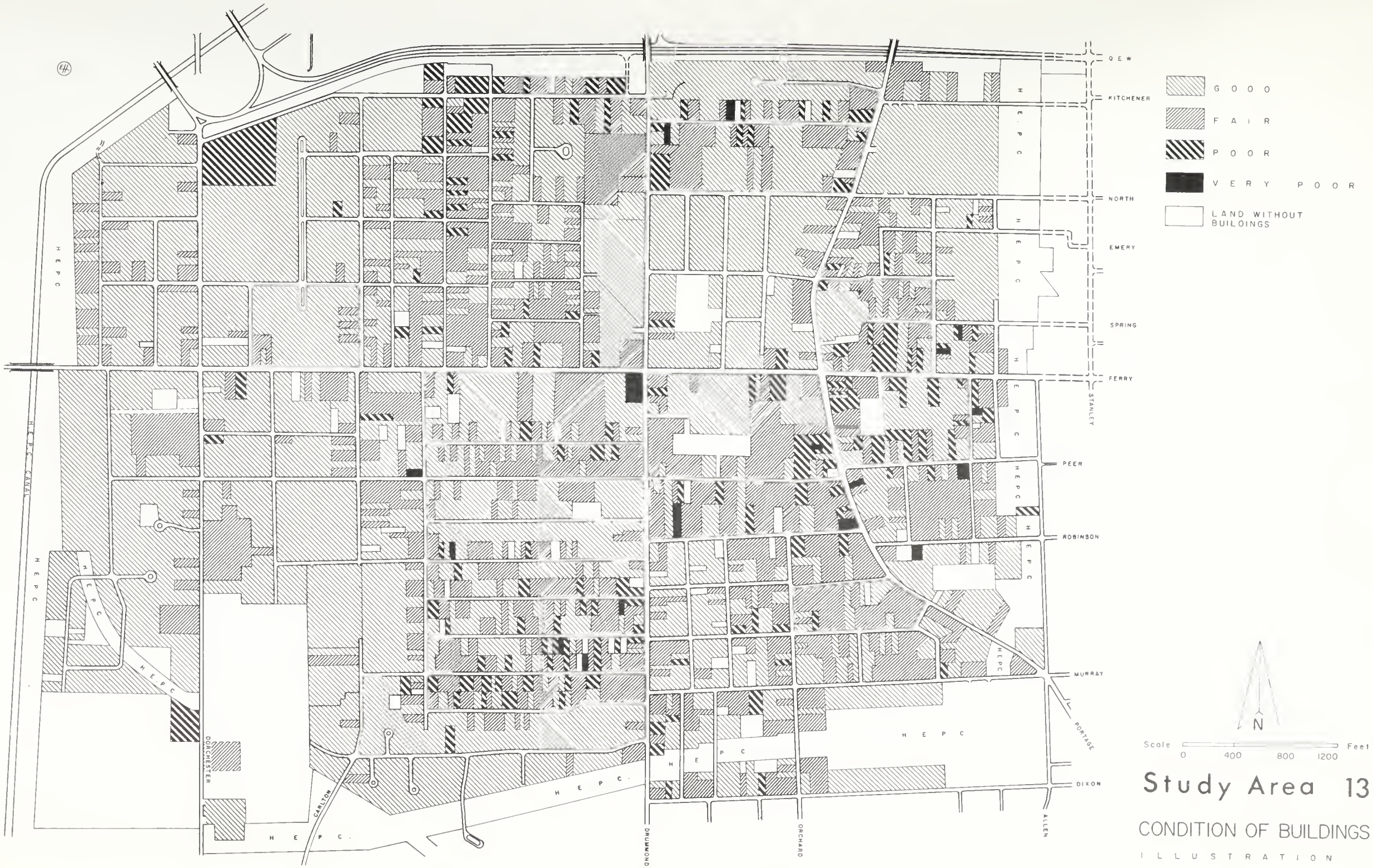
Classification	No. of Structures	Percentage
Good	1403	82.15
Fair	276	16.18
Poor	24	1.42
Very Poor	4	.25
TOTAL	1707	100.00

CONDITION OF RESIDENTIAL STRUCTURES

Classification	No. of Structures	Percentage
Good	1342	84.29
Fair	231	14.51
Poor	16	1.02
Very Poor	3	.18
TOTAL	1592	100.00

SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

Lot Space:	8.40 acres
Percentage of Total Residential Land:	1.98%



Study Area 13

CONDITION OF BUILDINGS

ILLUSTRATION

STUDY AREA NO. 14

CLASSIFICATION OF LAND USES

TYPE OF USE	Present Acreage	% of Total Present Acreage
Residential—Single Family	277.15	22.28
Residential—Multiple Dwellings	.42	.03
Motels - Hotels	67.30	5.48
Commercial Retail	17.00	1.38
Commercial Offices	—	—
Private Clubs	26.20	2.13
Warehousing	—	—
Wholesaling	—	—
Manufacturing	5.40	0.44
Service Industries	2.97	0.24
Institutions	49.77	4.05
Government and Utilities	.54	0.44
Parks	7.89	0.64
Transportation (Railways)	9.92	0.80
Residential Streets	44.46	3.62
Non-Residential Streets	66.43	5.41
Vacant Land	11.21	0.91
Agriculture	600.34	48.93
H.E.P.C.	39.60	3.22

Total Acreage of Study Area:	1226.60
Population of Study Area:	2420
Present Acreage Per 1000 Persons:	11
Present Gross Density of Population:	1.9 pers/acr.
Present Net Density of Population:	8.7 pers/acr.

RESIDENTIAL
DETACHED, SEMI-DETACHED DUPLEX, ROWHOUSING
TRIPLEX, FOURPLEX APARTMENT BUILDING
TOURIST HOME
MOTEL
RETAIL COMMERCIAL
SERVICE INDUSTRY

TRANSPORTATION
INSTITUTIONAL
CHURCH
SCHOOLS
PUBLIC
SEPARATE
SPECIAL
GOVERNMENT BUILDINGS PUBLIC UTILITIES

PARK, PLAY GROUND
AGRICULTURAL
LOCATION OF FARM BUILDINGS
WOODS
VACANT AND UNDEVELOPED LAND
MIXED USES

N

Scale 0 400 800 1200 Feet

Study Area 14

EXISTING LAND USE

ILLUSTRATION

CONDITION OF ALL STRUCTURES

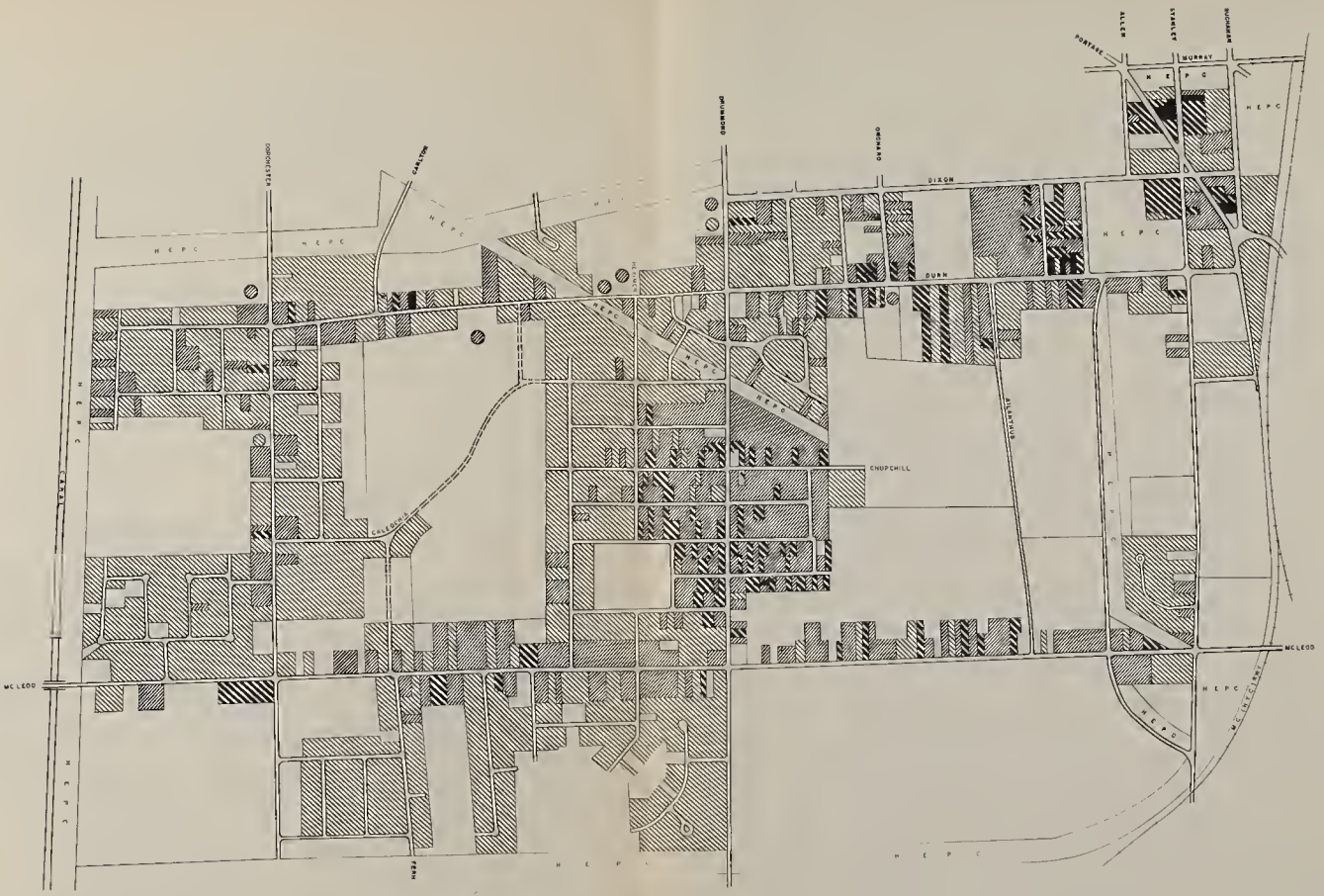
Classification	No. of Structures	Percentage
Good	430	70.74
Fair	145	23.74
Poor	30	4.93
Very Poor	3	.59
TOTAL	608	100

CONDITION OF RESIDENTIAL STRUCTURES

Classification	No. of Structures	Percentage
Good	407	73.47
Fair	129	23.27
Poor	17	3.08
Very Poor	1	0.18
TOTAL	554	100

SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

Lot Space:	7.74 acres
Percentage of Total Residential Land:	2.79%



GOOD

FAIR

POOR

VERY POOR

LAND WITHOUT BUILDINGS

N

Scale 0 400 800 1200 Feet

Study Area 14

CONDITION OF BUILDINGS

ILLUSTRATION

STUDY AREA NO. 15

CLASSIFICATION OF LAND USES

TYPE OF USE	Present Acreage	% of Total Present Acreage
Residential—Single Family	169.85	19.70
Residential—Multiple Dwellings	.95	.11
Motels - Hotels	8.04	.93
Commercial Retail	2.87	.33
Commercial Offices	.09	.01
Private Clubs	83	.10
Warehousing	—	—
Wholesaling	2.39	.28
Manufacturing	46.14	5.35
Service Industries	1.95	.23
Institutions	24.47	2.83
Government and Utilities	6.92	.80
Parks	46.36	5.38
Transportation (Railways)	16.21	1.88
Residential Streets	44.46	5.15
Non-Residential Streets	10.74	1.25
Vacant Land	477.62	55.38
Agriculture	2.40	.28
Transport Co.	0.12	.01

Total Acreage of Study Area:	525.16 acres
Population of Study Area:	3053
Present Acreage Per 1000 Persons:	56
Present Gross Density of Population:	5.7 pers/acr.
Present Net Density of Population:	18 pers/acr.

RESIDENTIAL
DETACHED, SEMI-DETACHED DUPLEX, ROWHOUSING
TRIPLEX, FOURPLEX APARTMENT BUILDING
TOURIST HOME
MOTEL
HOTEL
CLUB
COMMERCIAL
RETAIL
OFFICE
WHOLESALE
PARKING
INDUSTRIAL
MANUFACTURING
SERVICE
INSTITUTIONAL
CHURCH
CEMETERY
LIBRARY
PUBLIC SCHOOL
SEPARATE SCHOOL
GOVERNMENT BUILDINGS PUBLIC UTILITIES
PARK, PLAY GROUND
AGRICULTURAL
VACANT OR UNDEVELOPED LAND
MIXED USES

EXISTING LAND USE

ILLUSTRATION

Study Area 15

CONDITION OF ALL STRUCTURES

Classification	No. of Structures	Percentage
Good	565	62.8
Fair	242	26.9
Poor	76	8.4
Very Poor	17	1.9
TOTAL	900	100

CONDITION OF RESIDENTIAL STRUCTURES

Classification	No. of Structures	Percentage
Good	486	62.4
Fair	212	27.3
Poor	65	8.4
Very Poor	15	1.8
TOTAL	778	100

SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

Lot Space:	10.51 acres
Percentage of Total Residential Land:	6.15%

CONDITION OF BUILDINGS

ILLUSTRATION

Study Area 15

STUDY AREA NO. 16

CLASSIFICATION OF LAND USES

TYPE OF USE	Present Acreage	% of Total Present Acreage
Residential—Single Family	33.7	75
Residential—Multiple Dwellings	—	—
Motels - Hotels	—	—
Commercial Retail	—	—
Commercial Offices	—	—
Private Clubs	—	—
Warehousing	—	—
Wholesaling	—	—
Manufacturing	—	—
Service Industries	—	—
Institutions	—	—
Government and Utilities	—	—
Parks	—	—
Transportation	—	—
Residential Streets	—	—
Non-Residential Streets	—	—
Vacant Land	—	—
Agriculture	11.5	25

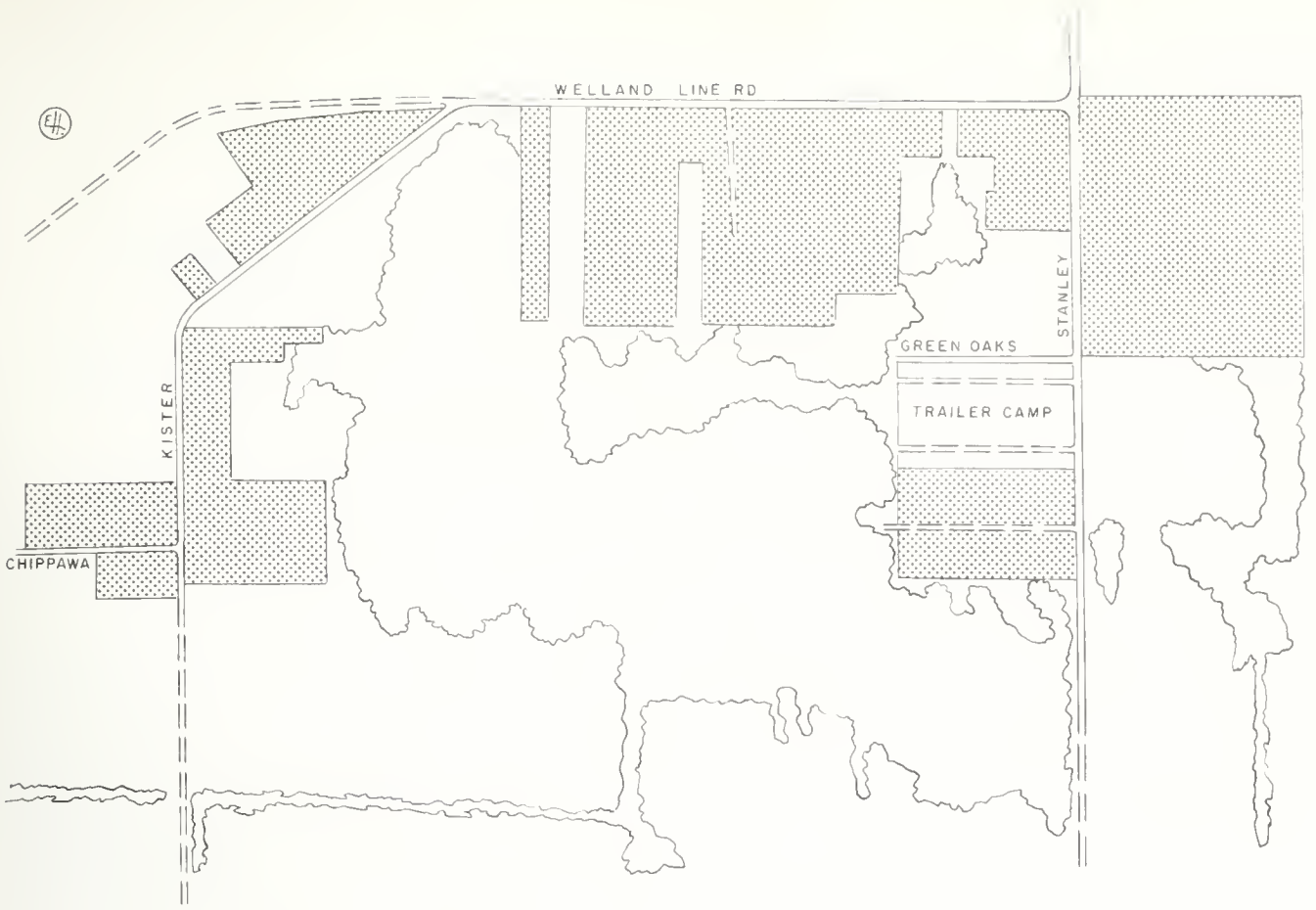
Total Acreage of Study Area:	45.2
Population of Study Area:	191
Present Acreage Per 1000 Persons:	2.
Present Gross Density of Population	4 pers/acr.
Present Net Density of Population:	6 pers/acr.

CONDITION OF ALL STRUCTURES

Classification	No. of Structures	Percentage
Good	7	15
Fair	14	30
Poor	16	35
Very Poor	9	20
TOTAL	46	100

SPACE OCCUPIED BY POOR AND VERY POOR RESIDENTIAL STRUCTURES

Lot Space:	23.5 acres
Percentage of Total Residential Land:	51.9%



SINGLE FAMILY RESIDENTIAL

VACANT OR AGRICULTURAL LAND

WOODS

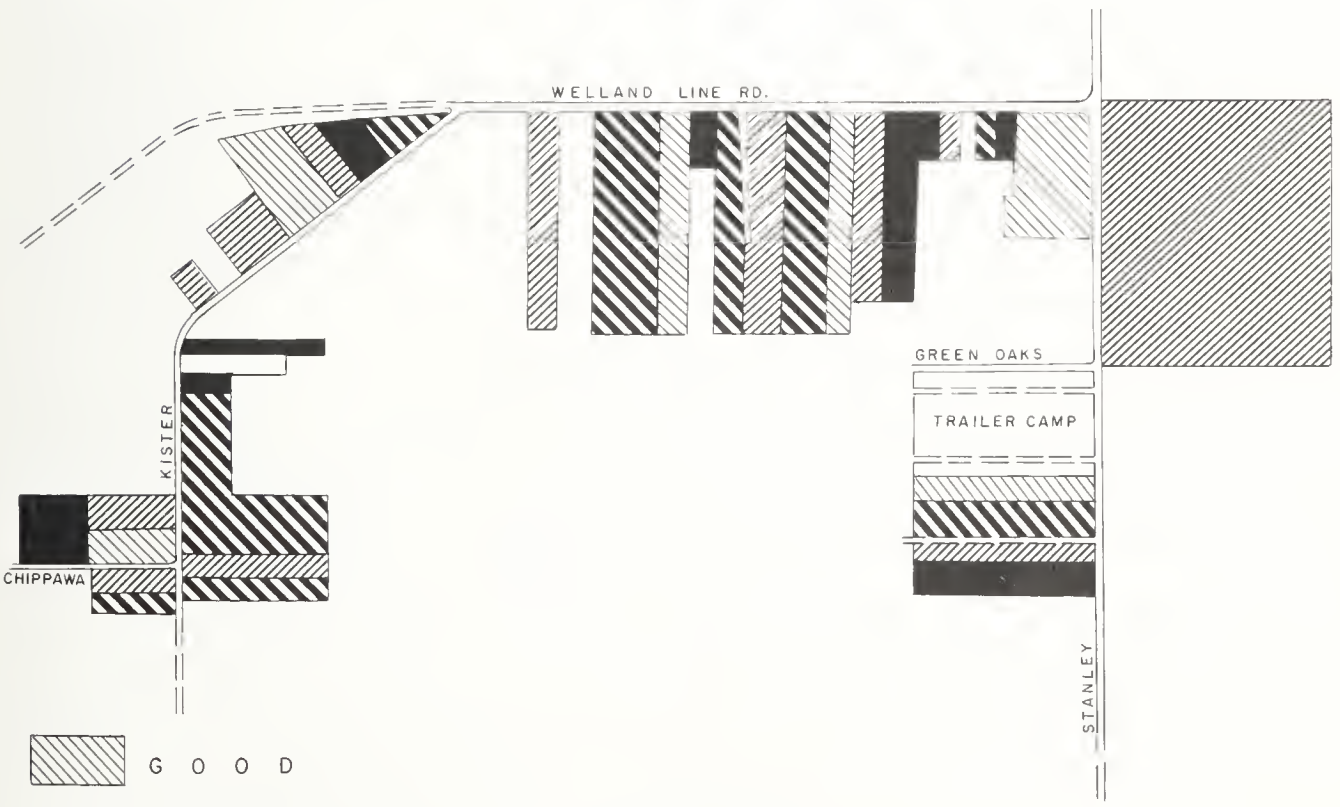
EXISTING LAND USE

ILLUSTRATION

N

Study Area 16

Scale 0 400 800 1200 Feet



GOOD

FAIR

POOR

VERY POOR

LAND WITHOUT BUILDINGS

CONDITION OF BUILDINGS

ILLUSTRATION

Appendix One

SURVEY METHOD: DESCRIPTION AND DEFINITIONS

All data relating to land use and building conditions contained in this report were obtained through a systematic field survey and a detailed inspection of the pertinent facts in the municipal assessment records.

The first step in this survey was to formulate a set of standards and criteria. These were then tested in the field on city blocks selected at random. On the basis of these tests, the original standards and criteria were adjusted and modified to local conditions. A final system of classification was thus devised.

In order to ensure maximum objectivity and minimize the possibility of variations in appraisal due to subjective values, each field team consisted of two members who had to reach mutual agreement in the classification and evaluation of every structure. For the first two weeks of the field survey, each member of a team was interchanged with a member from another team every two hours. After the initial two weeks, each member of the survey crew was shifted to a different partner once a day. At no time was a field team composed of less than two members. Throughout the duration of the field work, two or three teams (4 to 6 people) were in the field at all times. Thus, every effort was made to achieve a uniform standard of classification and appraisal.

Information that could not be gathered in the field was obtained from the assessment rolls and correlated with the field sheets. After the field work was completed, the members of the crews went to the assessment offices, where they were instructed by the Assessment Commissioners or their Assistants in the use of the records. Whenever questions arose, the Assessment Officers were kind enough to clear them up.

For the purpose of the field survey, the area was divided into sectors. Each sector corresponded to an assessment area. In turn, each sector was divided into city blocks. It is thus simple to obtain information on any lot or structure within the area by referring to area, block and lot numbers.

By the end of the field survey and assessment work, detailed information was available for every structure and lot within the area.

LAND UTILIZATION

Residential—Single family, detached houses; multiple family, semi-detached and row housing; apartment; tourist homes.

Commercial Accommodation — Motels; hotels.

Commercial — Retail; wholesale; warehousing; office; clubs.

Industrial — Manufacturing; service industry.

Transportation — Railways; parking; bus terminals; trucking.

Institutional — Churches; schools; hospitals; community buildings; government offices and public utilities.

Open Space — Parks and public recreational buildings; vacant land; agriculture.

CONDITION OF BUILDINGS

There are four classifications which are defined as follows:

Good: Structurally sound and needing no repairs or alterations other than maintenance. **Check Points:** requiring only painting and normal maintenance.

Fair: Structurally sound but needing minor repairs. **Check Points:** minor repairs needed other than structural, such as sheet metal work, including flashings, eavestroughs, downspouts, patching of wall sidings and roofing materials, trim, repointing of bricks, major paint work.

Poor: Structurally fairly sound but needing major repairs. **Check Points:** requiring major repairs including replacement of chimneys, wall and roof covering, staircases, floors, porches, stoops, steps and minor repairs to structure. Walls on good foundations which are slightly out of plumb, but which are in no danger of further settlement. Also finish woodwork close to or below grade. Superstructure sound, but post foundations needing replacement.

Very Poor: Structures with serious structural deficiencies or marked delapidation, or both. Ripe for demolition. **Check Points:** Leaning walls, sagging roofs, lintels and sills out of plumb and out of level, rotting structure, unsound foundations, masonry and chimneys unsafe, cracked masonry. Structure cannot be rebuilt.

Appendix Two

DEMOGRAPHIC DATA

The accompanying tables and charts provide an analytical summary of the characteristics of the present population of the Niagara Falls area and a twenty-year projection of the anticipated demographic evolution.

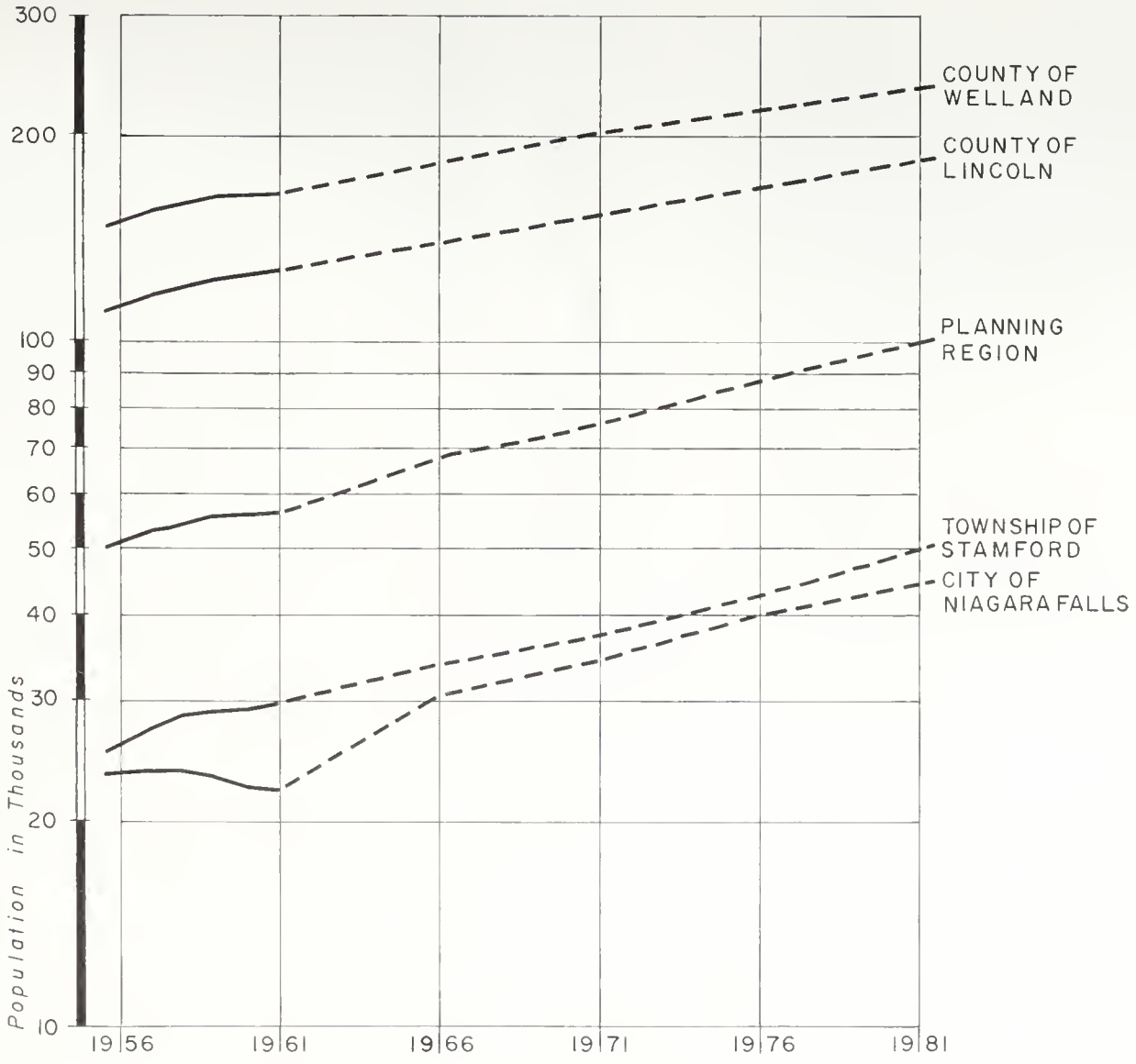
Except in Tables 4 and 8, which refer to the present City of Niagara Falls, both the actual and projected figures are presented separately for the former City, the former Township of Stamford and the Village of Chippawa. This division illustrates more clearly some of the differing characteristics and trends observable in the strictly "urban" and in the "suburban" sectors of the community.

The method used in establishing estimates of future demographic evolution, both in terms of numbers and age and sex characteristics, involved firstly the preparation of linear projections based on twenty-year past growth trends, which were then adjusted through the application of self-modifying variables (fertility, natality and mortality rates) and of externally-generated controls (spatial limitations, economic growth trends, employment opportunities).

In view of the fluctuations — whose frequency and range are unpredictable — which may affect the interplay of these and other variables that condition demographic evolution, there are no sure methods of projecting future population growth trends. Thus, the statistical analyses which are presented here do not constitute predictions, but estimates based on assumptions that were predicated as realistically as was feasible. They can be, nevertheless, very useful in the formulation of long-range planning objectives for the Niagara Falls community, if they are made to serve as broad guidelines in estimating likely future requirements in such sectors as housing, parks and open spaces, schools, retailing and service space, etc. Such projections may be helpful in determining specific renewal objectives in any given district of the community, particularly with regard to such aspects as population density distribution, the quantity and distribution of space needed for given urban uses or re-uses of the land, the intensiveness of use or re-use, the range of types of facilities required to meet the needs of the various segments of the community's population, etc.

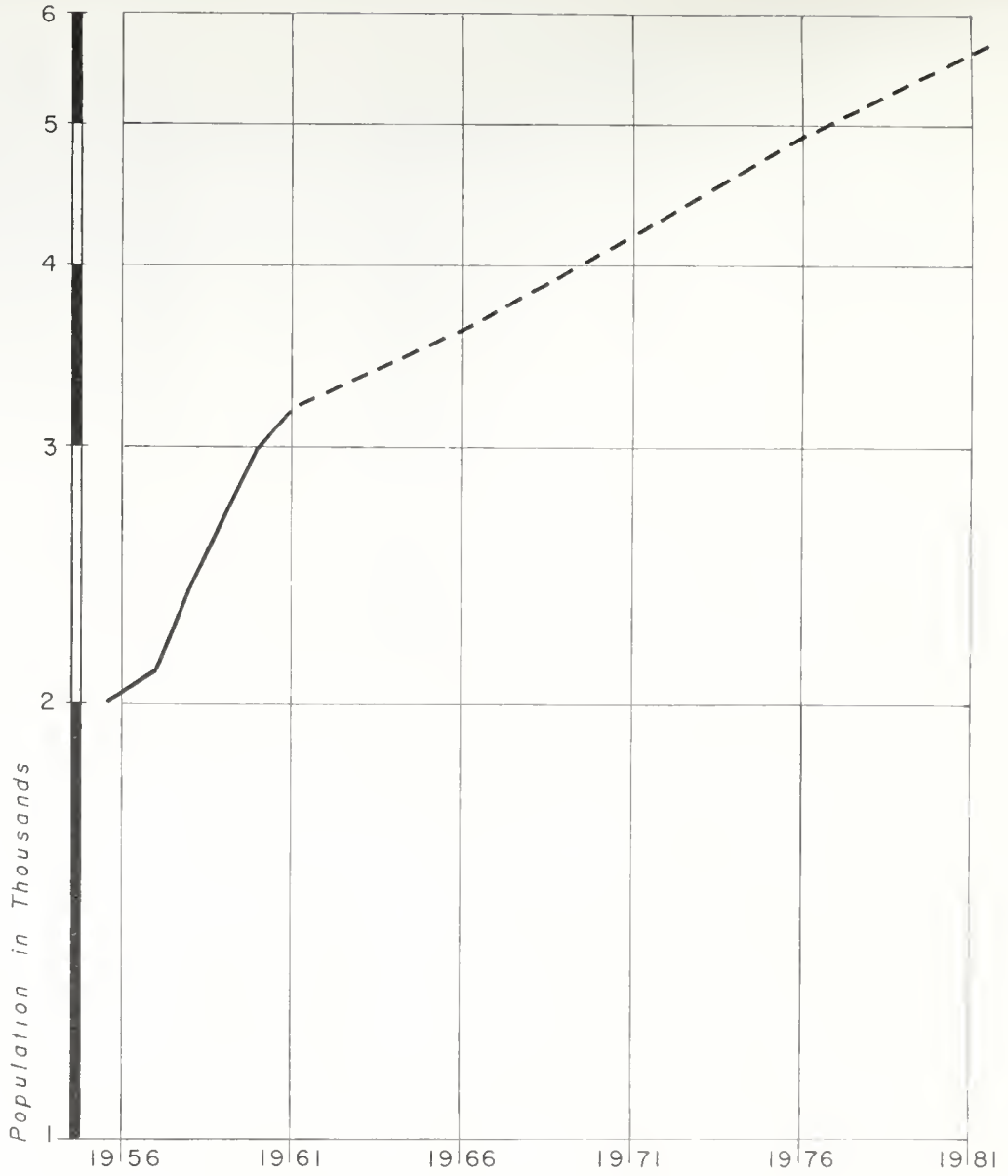
It is to serve these specific purposes that the accompanying set of population pyramids was prepared. This is an attempt to categorize the population in each of the component parts of the Niagara Falls community and at each of six five-year intervals.*

*—The population pyramids for the former City of Niagara Falls show an abnormal increment of the female population in the 15 to 35 age groups for the period 1966 to 1981. This is predicated on the possibility of a substantially expanded year-round female employment in services. The applicability of this variable is uncertain; its importance and effective influence (or absence of) should be re-assessed from time to time in the light of future developments in this employment sector.



NIAGARA FALLS AND REGION
ACTUAL AND PROJECTED POPULATION
1956 - 1981

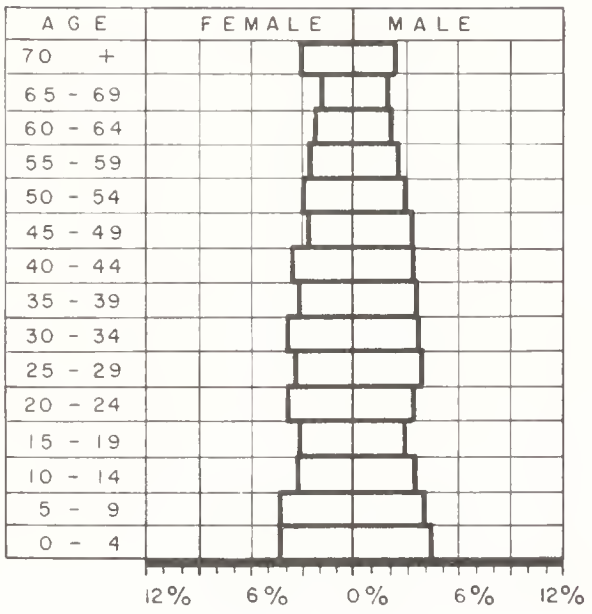
Actuol Populotion ---- Projected Populotion



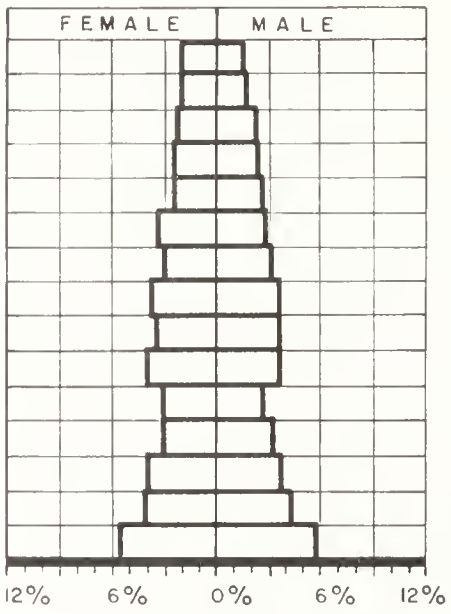
VILLAGE OF CHIPPAWA
ACTUAL AND PROJECTED POPULATION
1956 - 1981

Actuol Populotion ---- Projected Population

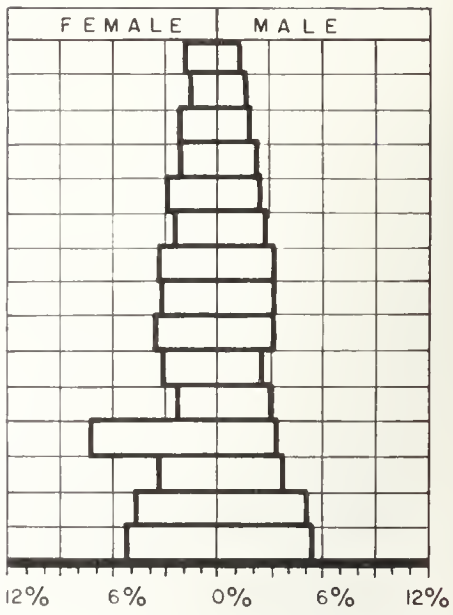
GEORGES POTVIN & ASSOCIATES
LAND USE CONSULTANTS
TORONTO, ONT MAR 1962



1956



1961



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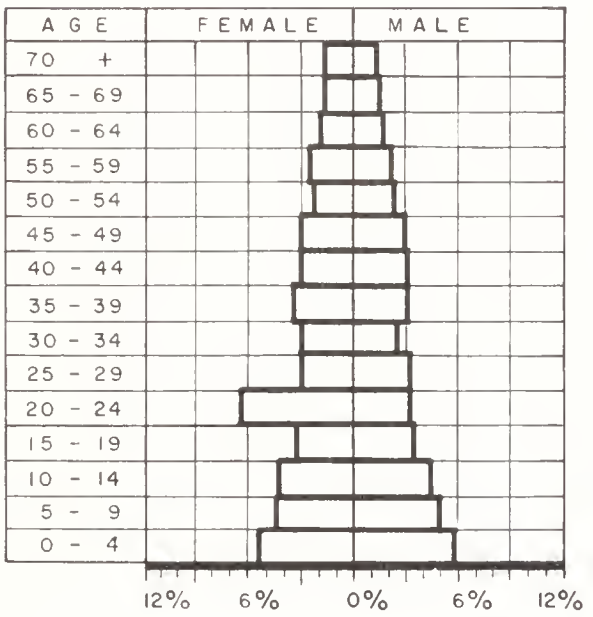

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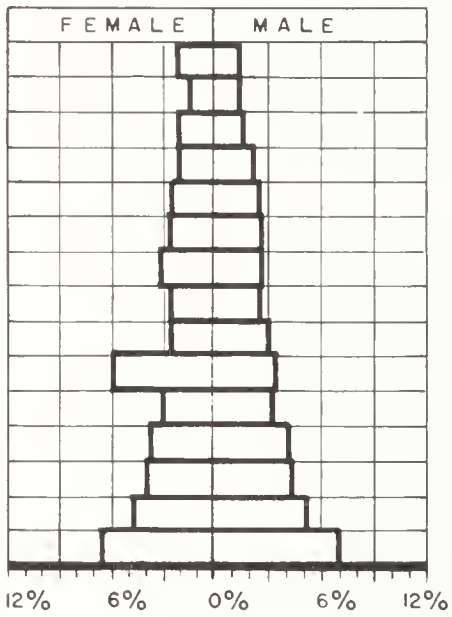

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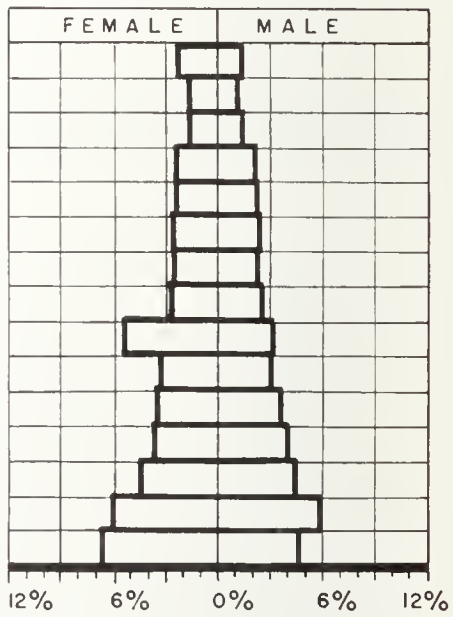
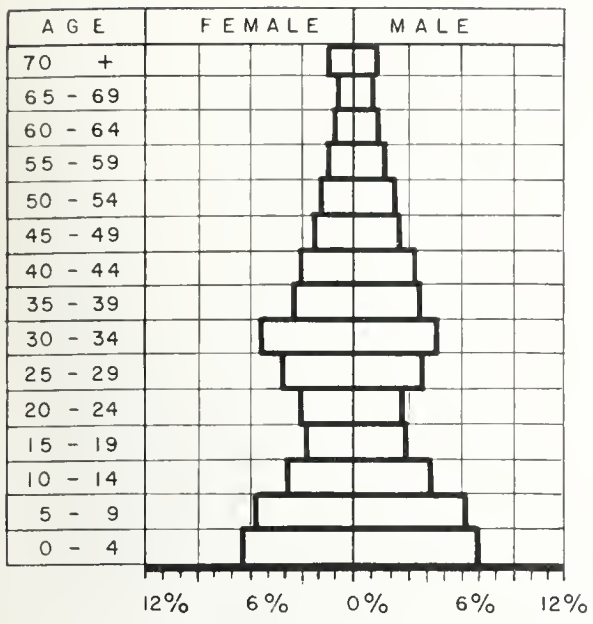


1981

FORMER CITY OF NIAGARA FALLS
ACTUAL AND PROJECTED POPULATION DISTRIBUTION BY AGE AND SEX 1956 - 1981

GEORGES POTVIN & ASSOCIATES
LAND USE CONSULTANTS
TORONTO, ONT. MAR. 1962



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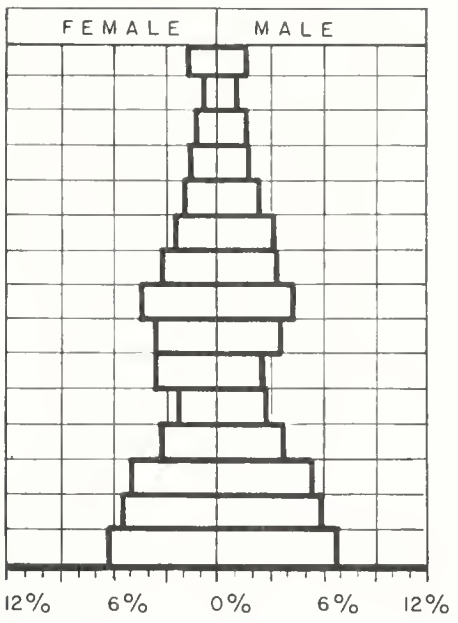

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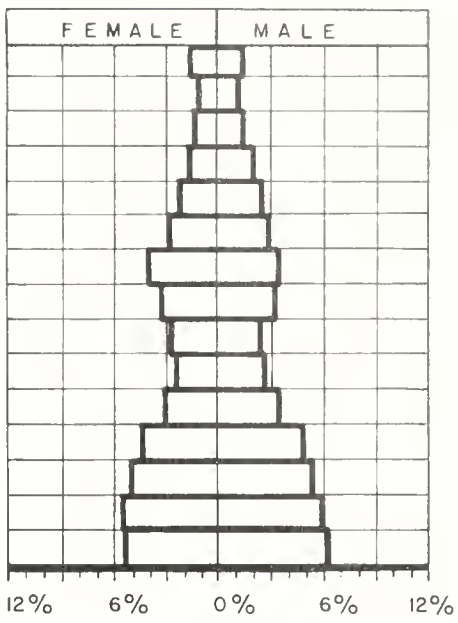

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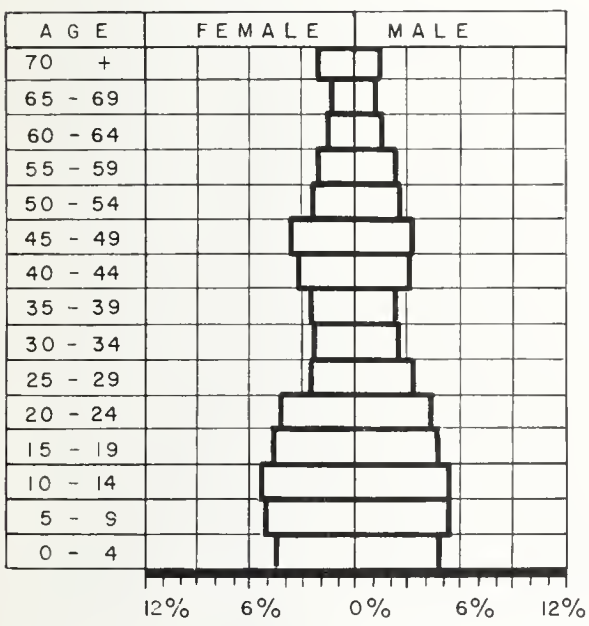

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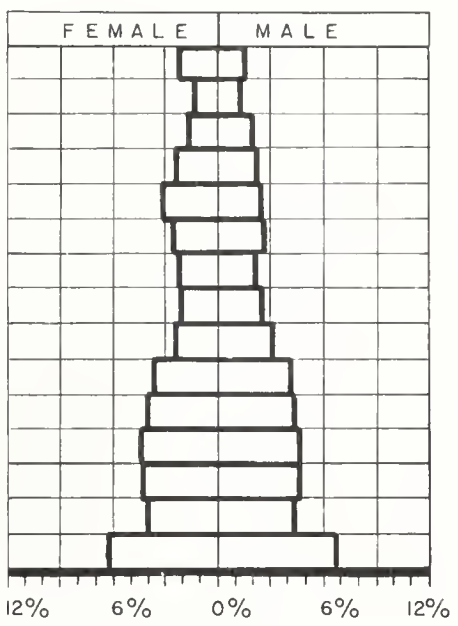

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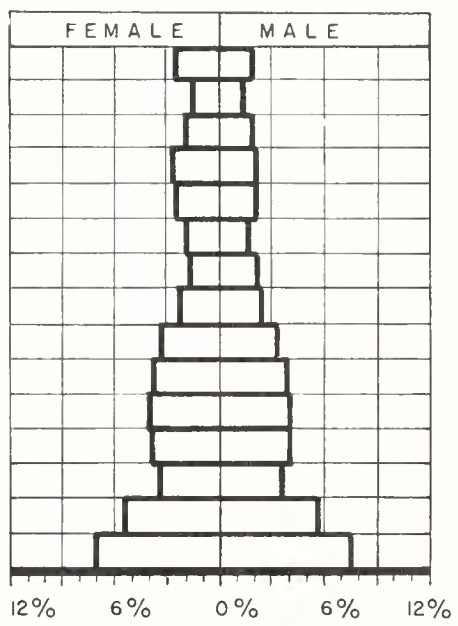
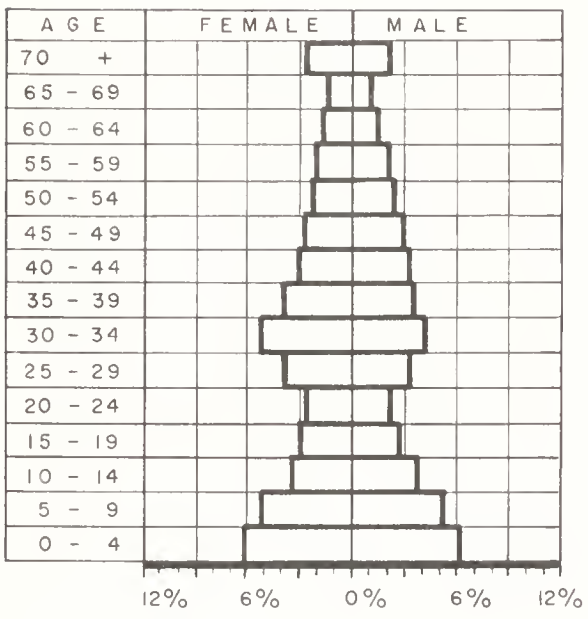


1981

FORMER TOWNSHIP OF STAMFORD

ACTUAL AND PROJECTED POPULATION DISTRIBUTION BY AGE AND SEX 1956 - 1981

GEORGES POTVIN & ASSOCIATES
LAND USE CONSULTANTS
TORONTO, ONT. MAR. 1962



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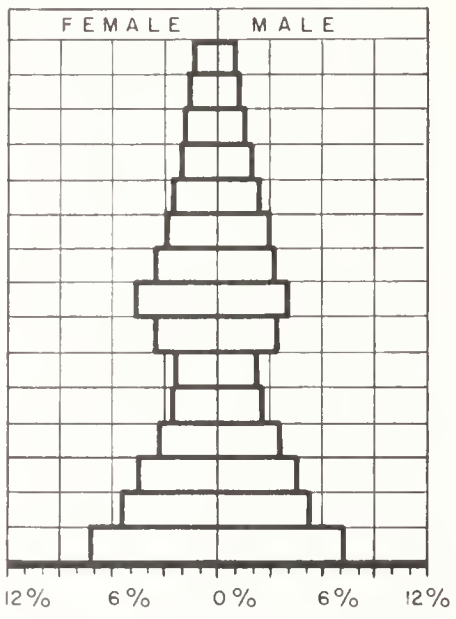
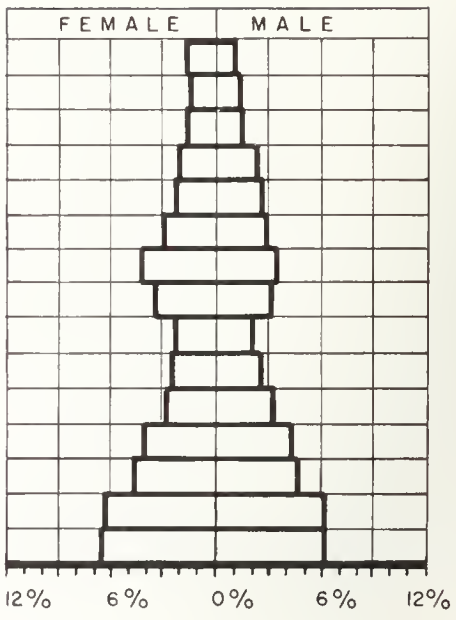
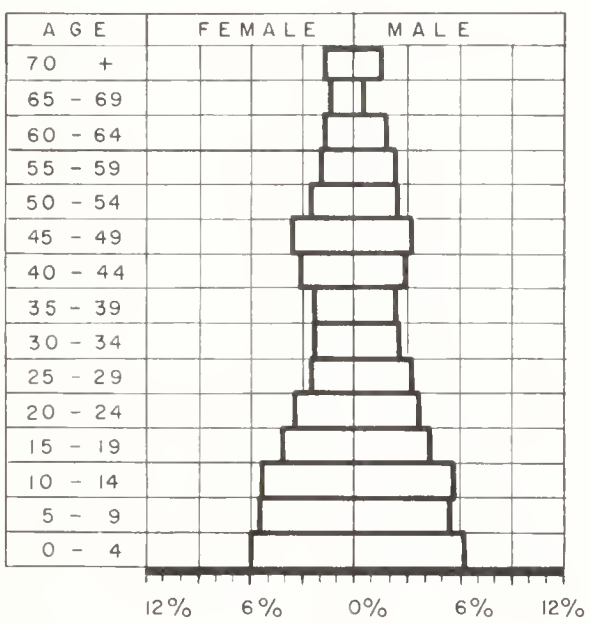


1961



1966



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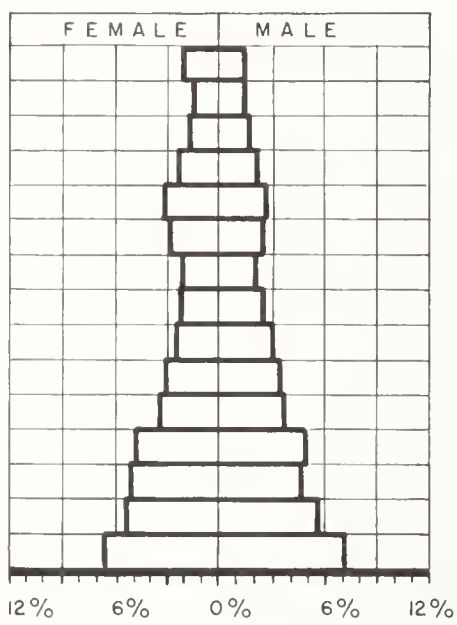

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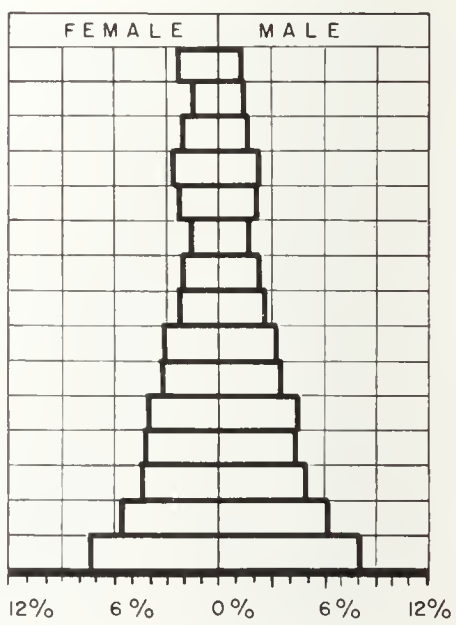

1981

VILLAGE OF CHIPPAWA
ACTUAL AND PROJECTED POPULATION DISTRIBUTION BY AGE AND SEX 1956 - 1981

GEORGES POTVIN & ASSOCIATES
LAND USE CONSULTANTS
TORONTO, ONT. MAR. 1962

Table 7

NIAGARA FALLS AND SURBURBAN AREA

ACTUAL AND PROJECTED POPULATION

(1871 - 1981)

Year	Welland County	Lincoln County	Niagara Falls	Stamford	Chippawa	Total Urban Area
1871	25,760	29,547	1,610	2,999	922	5,531
1881	31,771	31,573	2,347	3,162	664	6,173
1891	30,631	30,079	3,349	2,099	523	5,971
1901	31,588	30,552	4,244	2,140	460	6,844
1911	42,163	35,429	9,248	3,139	707	13,094
1921	66,668	48,625	14,764	7,495	1,137	23,396
1931	82,731	54,199	19,046	7,744	1,266	28,056
1941	93,836	65,066	20,589	9,574	1,385	31,548
1951	123,233	89,366	22,874	17,729	1,762	42,365
1956	149,606	111,740	23,563	25,809	2,039	51,411
1957	154,812	115,791	23,852	27,156	2,134	53,142
1958	158,742	110,696	23,858	28,476	2,380	54,714
1959	161,211	122,011	23,660	29,077	2,744	55,481
1960	162,589	124,446	22,575	30,008	3,027	55,610
1961	163,472	125,596	22,192	30,470	3,182	55,844
1966	181,823	137,880	30,235	33,879	3,676	67,790
1971	200,103	153,010	34,214	37,214	4,241	75,669
1976	218,383	168,140	39,990	42,664	4,905	87,559
1981	236,663	183,270	44,741	49,610	5,630	99,981

PERCENTAGE RATE OF CHANGE

Period						
1956-61	+ 9.2	+12.4	— 5.9	+18.1	+56.1	+ 8.6
1961-66	+11.2	+ 9.8	+36.2	+11.2	+15.5	+21.6
1966-71	+10.0	+11.0	+13.2	+ 9.8	+12.6	+11.6
1971-76	+ 9.1	+ 9.9	+16.9	+14.6	+15.6	+15.7
1976-81	+ 8.4	+ 9.0	+11.9	+16.3	+14.8	+14.2
1961-81	+44.8	+45.9	+101.6	+62.8	+76.9	+79.0

NOTES:

(1) 1956-1961 figures are taken from the MUNICIPAL DIRECTORY, Province of Ontario.

(2) Niagara Falls South was annexed to Niagara Falls in 1904.

(3) Other Source: Dominion Bureau of Statistics, Census of Canada, 1871-1956.

Table 8

NIAGARA FALLS AND SURBURBAN AREA

ACTUAL AND PROJECTED POPULATION, BY SEX AND AGE

(1956 - 1981)

PRESENT CITY OF NIAGARA FALLS

	1956			1961			1966			1971			1976			1981		
Age	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.
0 - 4	2,819	2,969	5,788	3,246	3,434	6,680	3,549	3,775	7,324	3,694	3,923	7,617	5,484	5,805	11,289	6,621	6,015	12,636
5 - 9	2,563	2,587	5,150	2,669	2,804	5,473	3,437	3,612	7,049	3,548	3,790	7,338	3,702	3,932	7,634	5,470	5,628	11,098
10 - 14	1,827	2,055	3,882	2,463	2,541	5,004	2,902	3,053	5,955	3,505	3,693	7,198	3,616	3,872	7,488	3,770	4,012	7,782
15 - 19	1,528	1,473	3,001	1,746	1,965	3,711	3,806	2,733	6,539	2,954	3,117	6,071	3,558	3,762	7,320	3,669	3,937	7,606
20 - 24	1,747	1,605	3,352	1,502	1,528	3,030	1,960	2,186	4,146	3,882	2,818	6,700	3,034	3,204	7,238	3,637	3,843	7,480
25 - 29	1,956	1,979	3,935	1,794	1,666	3,460	1,824	1,795	3,619	2,075	2,399	4,474	4,093	3,132	7,225	3,250	3,414	6,664
30 - 34	2,311	2,149	4,460	1,979	1,940	3,919	2,111	1,900	4,011	1,976	1,988	3,964	2,225	2,590	4,815	4,232	3,320	7,552
35 - 39	1,765	1,853	3,618	2,267	2,145	4,412	2,198	2,202	4,400	2,203	2,016	4,219	2,069	2,104	4,173	2,319	2,705	5,024
40 - 44	1,650	1,738	3,388	1,693	1,791	3,484	2,453	2,225	4,678	2,253	2,267	4,520	2,258	2,083	4,341	2,131	2,173	4,304
45 - 49	1,302	1,494	2,796	1,555	1,641	3,196	1,841	1,935	3,776	2,471	2,243	4,714	2,273	2,284	4,557	2,193	2,102	4,295
50 - 54	1,202	1,298	2,500	1,218	1,374	2,592	1,690	1,749	3,438	1,852	1,925	3,777	2,476	2,231	4,707	2,285	2,283	4,568
55 - 59	1,050	1,149	2,199	1,126	1,157	2,283	1,315	1,456	2,771	1,684	1,707	3,391	1,848	1,886	3,734	2,466	2,182	4,648
60 - 64	890	835	1,725	960	998	1,958	1,181	1,196	2,377	1,297	1,379	2,676	1,660	1,625	3,285	1,828	1,800	3,628
65 - 69	725	732	1,457	771	712	1,483	909	979	1,888	1,137	1,090	2,227	1,256	1,266	2,522	1,612	1,505	3,117
70 -	1,157	964	2,121	1,044	933	1,977	1,226	917	2,143	1,412	1,130	2,542	1,806	1,520	3,326	2,247	1,702	3,949
Totals	24,492	24,880	49,372	26,033	26,629	52,662	32,402	31,713	64,114	35,943	35,485	71,428	41,368	41,296	83,654	47,730	46,621	94,351

Table 9

NIAGARA FALLS AND SURBURBAN AREA
ACTUAL AND PROJECTED PERCENTAGE DISTRIBUTION OF POPULATION, BY SEX AND AGE

(1956 - 1981)

PRESENT CITY OF NIAGARA FALLS

Age	1956			1961			1966			1971			1976			1981		
	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.
0 - 4	5.71	6.01	11.72	6.16	6.95	12.68	5.53	5.89	11.42	5.17	5.49	10.66	6.55	6.94	13.50	7.02	6.38	13.40
5 - 9	5.19	5.24	10.43	5.07	5.32	10.39	5.36	5.63	10.99	4.97	5.31	10.27	4.42	4.70	9.12	5.80	5.96	11.76
10 - 14	3.70	4.16	7.86	4.68	4.82	9.50	4.53	4.76	9.29	4.91	5.17	10.08	4.32	4.63	8.95	4.00	4.25	8.25
15 - 19	3.09	2.98	6.07	3.32	3.73	7.05	5.94	4.26	10.20	4.14	4.36	8.50	4.25	4.50	8.75	3.89	4.17	8.06
20 - 24	3.54	3.25	6.78	2.85	2.90	5.75	3.06	3.41	6.47	5.43	3.94	9.38	3.63	3.83	8.65	3.85	4.07	7.93
25 - 29	3.96	4.01	7.97	3.41	3.16	6.57	2.84	2.80	5.64	2.90	3.36	6.26	4.89	3.74	8.64	3.44	3.62	7.06
30 - 34	4.68	4.35	9.03	3.76	3.68	7.44	3.29	2.96	6.26	2.77	2.78	5.55	2.66	3.10	5.76	4.49	3.52	8.00
35 - 39	3,57	3.75	7.33	4.30	4.07	8.38	3.43	3.43	6.86	3.08	2.82	5.90	2.47	2.51	4.99	2.46	2.87	5.32
40 - 44	3.34	3.52	6.86	3.21	3.40	6.61	3.83	3.47	7.30	3.15	3.17	6.33	2.70	2.49	5.19	2.26	2.30	4.56
45 - 49	2.64	3.03	5.66	2.95	3.12	6.07	2.87	3.02	5.89	3.46	3.14	6.60	2.72	2.73	5.45	2.32	2.23	4.55
50 - 54	2.43	2.63	5.06	2.31	2.61	4.92	2.63	2.73	5.36	2.60	2.70	5.29	2.96	2.67	5.63	2.42	2.42	4.84
55 - 59	2.13	2.33	4.45	2.14	2.20	4.33	2.05	2.28	4.32	2.36	2.39	4.75	2.21	2.25	4.46	2.61	2.31	4.93
60 - 64	1.80	1.69	3.49	1.82	1.89	3.72	1.84	1.86	3.71	1.82	1.93	3.75	1.98	1.94	3.93	1.94	1.91	3.85
65 - 69	1.47	1.48	2.95	1.46	1.35	2.82	1.42	1.53	2.94	1.60	1.53	3.12	1.50	1.51	3.01	1.71	1.60	3.30
70 -	2.34	1.95	4.29	1.98	1.77	3.75	1.91	1.43	3.34	1.98	1.58	3.56	2.16	1.82	3.97	2.38	1.80	4.19
Totals	49.61	50.39	100.00	49.43	50.57	100.00	50.54	49.46	100.00	50.32	49.68	100.00	50.04	49.96	100.00	50.59	49.41	100.00

Table 10

NIAGARA FALLS AND SURBURBAN AREA

ACTUAL AND PROJECTED POPULATION, BY SEX AND AGE

(1956 - 1981)

FORMER CITY OF NIAGARA FALLS

	1956			1961			1966			1971			1976			1981		
Age	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.
0 - 4	1,082	1,123	2,205	1,265	1,332	2,597	1,607	1,712	3,319	1,941	2,059	4,000	2,717	2,874	5,591	3,061	2,243	5,304
5 - 9	1,044	959	2,003	932	976	1,908	1,481	1,580	3,061	1,607	1,733	3,340	1,946	2,063	4,009	2,706	2,712	5,418
10 - 14	806	890	1,696	909	865	1,774	1,145	1,202	2,347	1,526	1,635	3,161	1,652	1,789	3,441	1,991	2,116	4,107
15 - 19	781	704	1,485	710	777	1,487	2,247	1,059	3,306	1,180	1,246	2,426	1,561	1,682	3,243	1,687	1,832	3,519
20 - 24	938	851	1,789	710	644	1,354	894	971	1,865	2,296	1,116	3,412	1,232	1,304	2,536	1,613	1,736	3,349
25 - 29	867	947	1,814	910	843	1,753	974	844	1,818	1,035	1,113	2,148	2,434	1,360	3,794	1,374	1,445	2,819
30 - 34	952	930	1,882	821	843	1,664	1,176	1,009	2,185	1,073	973	2,046	1,133	1,240	2,373	2,530	1,486	4,016
35 - 39	779	843	1,622	865	865	1,730	1,025	1,067	2,092	1,236	1,086	2,322	1,134	1,050	2,184	1,195	1,317	2,512
40 - 44	848	781	1,629	688	755	1,443	1,045	1,048	2,093	1,061	1,111	2,172	1,271	1,131	2,402	1,175	1,096	2,271
45 - 49	671	769	1,440	732	666	1,398	829	900	1,729	1,058	1,061	2,119	1,075	1,124	2,199	1,197	1,143	2,340
50 - 54	692	706	1,398	578	643	1,221	867	794	1,661	837	897	1,734	1,063	1,056	2,119	1,082	1,129	2,211
55 - 59	631	656	1,287	578	578	1,156	679	746	1,425	863	772	1,635	836	874	1,710	1.059	1,028	2,087
60 - 64	572	494	1,066	533	510	1,043	673	637	1,310	667	697	1,364	847	725	1,572	825	824	1,649
65 - 69	461	465	926	466	377	843	503	538	1,041	641	567	1,208	639	626	1,265	815	657	1,472
70 -	745	576	1,321	466	355	821	601	382	983	639	488	1,127	825	727	1,552	967	700	1,667
Totals	11,869	11,694	23,563	11,163	11,029	22,192	15,746	14,489	30,235	17,660	16,554	34,214	20,365	19,625	39,990	23,277	21,464	44,741

Table 11

NIAGARA FALLS AND SURBURBAN AREA
ACTUAL AND PROJECTED PERCENTAGE DISTRIBUTION OF POPULATION, BY SEX AND AGE

(1956 - 1981)

FORMER CITY OF NIAGARA FALLS

	1956			1961			1966			1971			1976			1981		
Age	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.
0 - 4	4.6	4.7	9.3	5.7	6.0	11.7	5.3	5.7	11.0	5.6	6.0	11.6	6.8	7.2	14.0	6.8	5.0	11.8
5 - 9	4.4	4.1	8.5	4.2	4.4	8.6	4.9	5.2	10.1	4.7	5.1	9.8	4.9	5.2	10.1	6.0	6.1	12.1
10 - 14	3.4	3.8	7.2	4.1	3.9	8.0	3.8	4.0	7.8	4.5	4.8	9.3	4.1	4.5	8 6	4.4	4.7	9.1
15 - 19	3.3	3.0	6.3	3.2	3.5	6.7	7.4	3.5	10.9	3.4	3.6	7.0	3.9	4.2	8.1	3.8	4.1	7.9
20 - 24	4.0	3.6	7.6	3.2	2.9	6.1	2.6	3.2	5.8	6.7	3.3	10.0	3.1	3.3	6.4	3.6	3.9	7.5
25 - 29	3.6	4.0	7.6	4.1	3.8	7.9	3.2	2.8	6.0	3.0	3.3	6.3	6.1	3.4	9.5	3.1	3.2	6.3
30 - 34	4.0	3.9	7.9	3.7	3.8	7.5	3.9	3.3	7.2	3.1	2.8	5.9	2.8	3.1	5.9	5.7	3.3	9.0
35 - 39	3.3	3.6	6.9	3.9	3.9	7.8	3.4	3.5	6.9	3.6	3.2	6.8	2.8	2.6	5.4	2.7	2.9	5.6
40 - 44	3.6	3.4	7.0	3.1	3.4	6.5	3.5	3.5	7.0	3.1	3.2	6.3	3.2	2.8	6.0	2.6	2.4	5.0
45 - 49	2.8	3.3	6.1	3.3	3.0	6.3	2.7	3.0	5.7	3.1	3.1	6.2	2.7	2.8	5.5	2.7	2.6	5.3
50 - 54	2.9	3.1	6.0	2.6	2.9	5.5	2.9	2.6	5.5	2.4	2.6	5.0	2.7	2.6	5.3	2.4	2.5	4.9
55 - 59	2.7	2.8	5.5	2.6	2.6	5.2	2.2	2.5	4.7	2.5	2.3	4.8	2.1	2.2	4.3	2.4	2.3	4.7
60 - 64	2.4	2.1	4.5	2.4	2.3	4.7	2.2	2.1	4.3	2.0	2.0	4.0	2.1	1.8	3.9	1.8	1.8	3.6
65 - 69	2.0	2.0	4.0	2.1	1.7	3.8	1.8	1.9	3.7	1.9	1.7	3.6	1.6	1.6	3.2	1.8	1.5	3.3
70 -	3.2	2.4	5.6	2.1	1.6	3.7	2.0	1.4	3.4	1.9	1.5	3.4	2.2	1.6	3.8	2.2	1.7	3.9
Totals	50.2	49.8	100.0	50.3	49.7	100.0	51.8	49.2	100.0	51.5	48.5	100.0	51.1	48.9	100.0	52.0	48.0	100.0

Table 12

NIAGARA FALLS AND SURBURBAN AREA

ACTUAL AND PROJECTED POPULATION, BY SEX AND AGE

(1956 - 1981)

FORMER TOWNSHIP OF STAMFORD

	1956			1961			1966			1971			1976			1981		
Age	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.
0 - 4	1,737	1,846	3,583	1,981	2,102	4,083	1,942	2,063	4,005	1,753	1,864	3,617	2,767	2,931	5,698	3,560	3,772	7,332
5 - 9	1,519	1,628	3,147	1,737	1,828	3,565	1,956	2,032	3,988	1,941	2,057	3,998	1,756	1,869	3,625	2,764	2,916	5,680
10 - 14	1,021	1,165	2,186	1,554	1,676	3,230	1,757	1,851	3,608	1,979	2,058	4,037	1,964	2,083	4,047	1,779	1,896	3,675
15 - 19	747	769	1,516	1,036	1,188	2,224	1,559	1,674	3,233	1,774	1,871	3,645	1,997	2,080	4,077	1,982	2,105	4,087
20 - 24	809	754	1,563	792	884	1,676	1,066	1,215	2,281	1,586	1,702	3,288	1,802	1,900	3,702	2,024	2,107	4,131
25 - 29	1,089	1,032	2,121	884	823	1,707	850	951	1,801	1,040	1,286	2,326	1,659	1,772	3,431	1,876	1,969	3,845
30 - 34	1,359	1,219	2,578	1,158	1,097	2,255	935	891	1,826	903	1,015	1,918	1,092	1,350	2,442	1,702	1,834	3,536
35 - 39	986	1,010	1,996	1,402	1,280	2,682	1,173	1,135	2,308	967	930	1,897	935	1,054	1,989	1,124	1,388	2,512
40 - 44	802	957	1,759	1,005	1,036	2,041	1,408	1,177	2,585	1,192	1,156	2,348	987	952	1,939	956	1,077	2,033
45 - 49	631	725	1,356	823	975	1,798	1,012	1,035	2,047	1,413	1,182	2,595	1,198	1,160	2,358	996	959	1,955
50 - 54	510	592	1,102	640	731	1,371	823	954	1,777	1,015	1,028	2,043	1,413	1,175	2,588	1,203	1,154	2,357
55 - 59	419	493	912	548	579	1,127	636	710	1,346	821	935	1,756	1,012	1,012	2,024	1,407	1,154	2,561
60 - 64	318	341	659	427	488	915	508	559	1,067	630	682	1,312	813	900	1,713	1,003	976	1,979
65 - 69	264	267	531	305	335	640	406	441	847	496	523	1,019	617	640	1,257	797	848	1,645
70 -	412	388	800	578	578	1,156	625	535	1,160	773	642	1,415	981	793	1,774	1,280	1,002	2,282
Totals	12,623	13,186	25,809	14,870	15,600	30,470	16,656	17,223	33,879	18,283	18,931	37,214	20,993	21,671	42,664	24,453	25,157	49,610

Table 13

NIAGARA FALLS AND SURBURBAN AREA
ACTUAL AND PROJECTED PERCENTAGE DISTRIBUTION OF POPULATION, BY SEX AND AGE

(1956 - 1981)

FORMER TOWNSHIP OF STAMFORD

	1956			1961			1966			1971			1976			1981		
Age	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.
0 - 4	6.7	7.1	13.8	6.5	6.9	13.4	5.7	6.1	11.8	4.7	5.0	9.7	6.5	6.9	13.4	7.2	7.6	14.8
5 - 9	5.9	6.3	12.2	5.7	6.0	11.7	5.8	6.0	11.8	5.2	5.5	10.7	4.1	4.4	8.5	5.6	5.9	11.5
10 - 14	4.0	4.5	8.5	5.1	5.5	10.6	5.2	5.5	10.7	5.3	5.5	10.8	4.6	4.9	9.5	3.6	3.8	7.4
15 - 19	2.9	3.0	5.9	3.4	3.9	7.3	4.6	4.9	9.5	4.8	5.0	9.8	4.7	4.9	9.6	4.0	4.2	8.2
20 - 24	3.1	2.9	6.0	2.6	2.9	5.5	3.1	3.6	6.7	4.3	4.6	8.9	4.2	4.4	8.6	4.1	4.2	8.3
25 - 29	4.2	4.0	8.2	2.9	2.7	5.6	2.5	2.8	5.3	2.8	3.5	6.3	3.9	4.2	8.1	3.8	4.0	7.8
30 - 34	5.3	4.7	10.0	3.8	3.6	7.4	2.8	2.6	5.4	2.4	2.7	5.1	2.6	3.2	5.8	3.4	3.7	7.1
35 - 39	3.8	3.9	7.7	4.6	4.2	8.8	3.5	3.4	6.9	2.6	2.5	5.1	2.2	2.5	4.7	2.3	2.8	5.1
40 - 44	3.1	3.7	6.8	3.3	3.4	6.7	4.2	3.5	7.7	3.2	3.1	6.3	2.3	2.2	4.5	1.9	2.2	4.1
45 - 49	2.4	2.8	5.2	2.7	3.2	5.9	3.0	3.1	6.1	3.8	3.2	7.0	2.8	2.7	5.5	2.0	1.9	3.9
50 - 54	2.0	2.3	4.3	2.1	2.4	4.5	2.4	2.8	5.2	2.7	2.8	5.5	3.3	2.7	6.0	2.4	2.3	4.7
55 - 59	1.6	1.9	3.5	1.8	1.9	3.7	1.9	2.1	4.0	2.2	2.5	4.7	2.4	2.4	4.8	2.8	2.3	5.1
60 - 64	1.2	1.4	2.6	1.4	1.6	3.0	1.5	1.6	3.1	1.7	1.8	3.5	1.9	2.1	4.0	2.0	2.0	4.0
65 - 69	1.0	1.1	2.1	1.0	1.1	2.1	1.2	1.3	2.5	1.3	1.4	2.7	1.4	1.5	2.9	1.6	1.7	3.3
70 -	1.7	1.5	3.2	1.9	1.9	3.8	1.8	1.5	3.3	2.2	1.7	3.9	2.3	1.8	4.1	2.6	2.0	4.6
Totals	48.9	51.1	100.0	48.8	51.2	100.0	49.2	50.8	100.0	49.2	50.8	100.0	49.2	50.8	100.0	49.3	50.7	100.0

Table 14

NIAGARA FALLS AND SURBURBAN AREA

ACTUAL AND PROJECTED POPULATION, BY SEX AND AGE

(1956 - 1981)

VILLAGE OF CHIPPAWA

	1956			1961			1966			1971			1976			1981		
Age	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.
0 - 4	124	130	254	229	235	464	243	235	478	259	276	535	326	353	679	428	456	884
5 - 9	106	113	219	169	175	344	232	235	467	242	237	479	260	279	539	291	349	540
10 - 14	72	82	154	146	156	302	173	180	353	233	242	475	250	240	490	265	282	547
15 - 19	60	61	121	102	124	226	151	162	313	178	187	365	240	245	485	248	242	490
20 - 24	52	49	101	86	89	175	107	129	236	153	165	318	181	191	372	242	248	490
25 - 29	79	75	154	77	77	154	92	103	195	110	140	250	157	181	338	186	203	389
30 - 34	105	94	199	121	115	236	88	92	180	106	114	220	123	152	275	175	191	366
35 - 39	77	79	156	150	134	284	129	121	250	97	102	199	113	123	236	135	163	298
40 - 44	62	75	137	108	111	219	154	140	294	136	127	263	103	103	206	118	129	247
45 - 49	57	66	123	86	102	188	110	110	220	157	140	297	137	127	264	107	107	214
50 - 54	46	53	99	80	89	169	85	103	188	110	110	220	157	142	299	135	129	264
55 - 59	41	49	90	64	70	134	77	85	162	85	102	187	113	108	221	158	135	293
60 - 64	34	36	70	57	60	117	62	66	128	76	81	157	83	93	176	113	101	214
65 - 69	27	27	54	45	45	90	55	55	110	64	59	123	74	74	148	84	91	175
70 -	57	51	108	38	42	80	62	40	102	81	72	153	103	74	177	135	84	219
Totals	999	1,040	2,039	1,558	1,624	3,182	1,820	1,856	3,676	2,087	2,154	4,241	2,420	2,485	4,905	2,720	2,910	5,630

Table 15

NIAGARA FALLS AND SUBURBAN AREA
ACTUAL AND PROJECTED PERCENTAGE DISTRIBUTION OF POPULATION, BY SEX AND AGE
(1956 - 1981)

VILLAGE OF CHIPPAWA

	1956			1961			1966			1971			1976			1981		
Age	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.	F.	M.	T.
0 - 4	6.1	6.4	12.5	7.2	7.4	14.6	6.6	6.4	13.0	6.1	6.5	12.6	6.6	7.2	13.8	7.6	8.1	15.7
5 - 9	5.2	5.5	10.7	5.3	5.5	10.8	6.3	6.4	12.7	5.7	5.6	11.3	5.3	5.7	11.0	3.4	6.2	9.6
10 - 14	3.5	4.0	7.5	4.6	4.9	9.5	4.7	4.9	9.6	5.5	5.7	11.2	5.1	4.9	10.0	4.7	5.0	9.7
15 - 19	2.9	3.0	5.9	3.2	3.9	7.1	4.1	4.4	8.5	4.2	4.4	8.6	4.9	5.0	9.9	4.4	4.3	8.7
20 - 24	2.6	2.4	5.0	2.7	2.8	5.5	2.9	3.5	6.4	3.6	3.9	7.5	3.7	3.9	7.6	4.3	4.4	8.7
25 - 29	3.9	3.7	7.6	2.4	2.5	4.9	2.5	2.8	5.3	2.6	3.3	5.9	3.2	3.7	6.9	3.3	3.6	6.9
30 - 34	5.1	4.6	9.7	3.8	3.6	7.4	2.4	2.5	4.9	2.5	2.7	5.2	2.5	3.1	5.6	3.1	3.4	6.5
35 - 39	3.8	3.9	7.7	4.7	4.2	8.9	3.5	3.3	6.8	2.3	2.4	4.7	2.3	2.5	4.8	2.4	2.9	5.3
40 - 44	3.0	3.7	6.7	3.4	3.5	6.9	4.2	3.8	8.0	3.2	3.0	6.2	2.1	2.1	4.2	2.1	2.3	4.4
45 - 49	2.8	3.2	6.0	2.7	3.2	5.9	3.0	3.0	6.0	3.7	3.3	7.0	2.8	2.6	5.4	1.9	1.9	3.8
50 - 54	2.3	2.6	4.9	2.5	2.8	5.3	2.3	2.8	5.1	2.6	2.6	5.2	3.2	2.9	6.1	2.4	2.3	4.7
55 - 59	2.0	2.4	4.4	2.0	2.2	4.2	2.1	2.3	4.4	2.0	2.4	4.4	2.3	2.2	4.5	2.8	2.4	5.2
60 - 64	1.7	1.8	3.5	1.8	1.9	3.7	1.7	1.8	3.5	1.8	1.9	3.7	1.7	1.9	3.6	2.0	1.8	3.8
65 - 69	1.3	1.3	2.6	1.4	1.4	2.8	1.5	1.5	3.0	1.5	1.4	2.9	1.5	1.5	3.0	1.5	1.6	3.1
70 -	2.8	2.5	5.3	1.2	1.3	2.5	1.7	1.1	2.8	1.9	1.7	3.6	2.1	1.5	3.6	2.4	1.5	3.9
Totals	49.0	51.0	100.0	48.9	51.1	100.0	49.5	50.5	100.0	49.2	50.8	100.0	49.3	50.7	100.0	48.3	51.7	100.0

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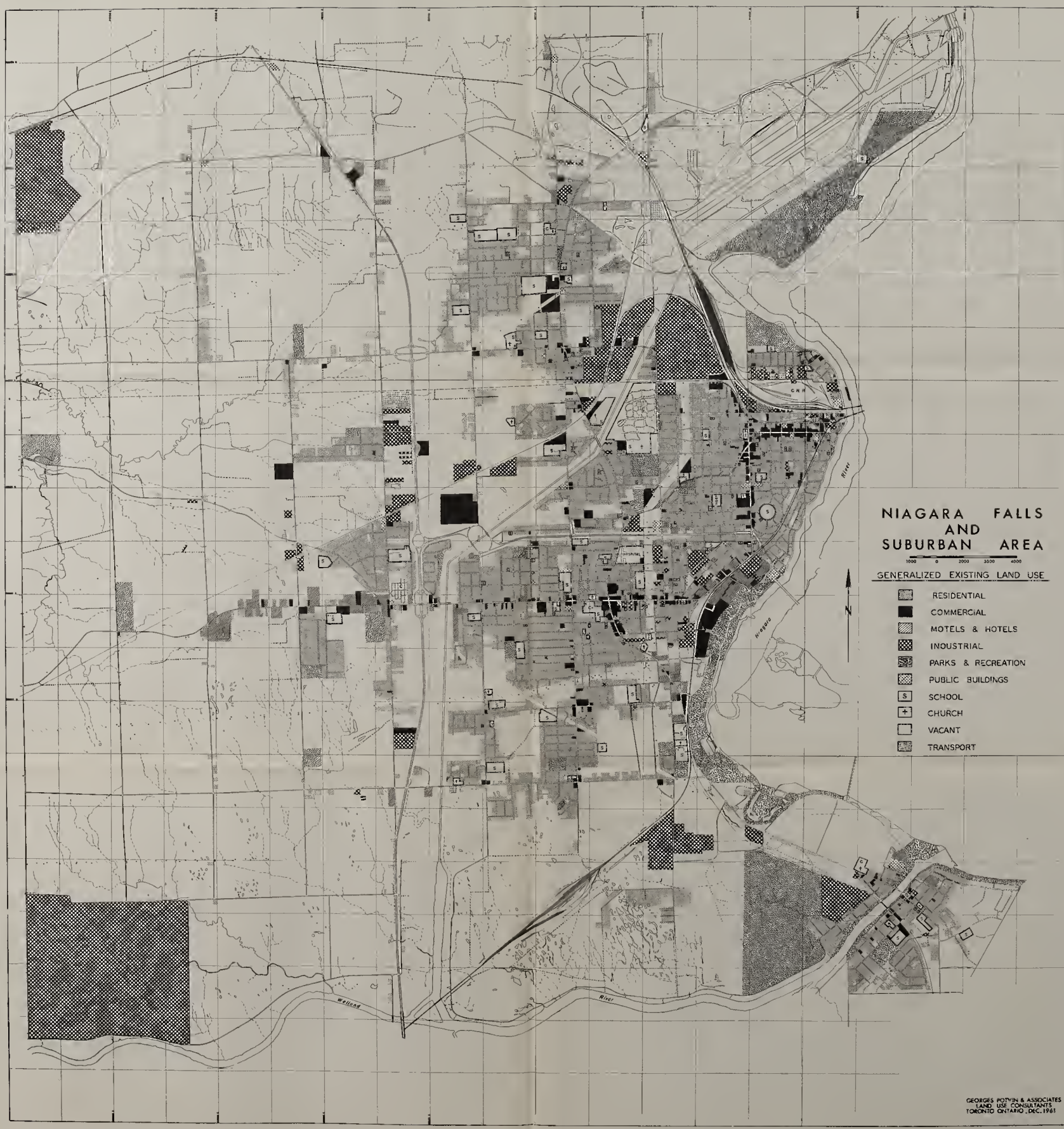
NIAGARA FALLS, CANA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AND
SUBURBAN AREA
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INDUSTRIAL
PARKS & RECREATION
PUBLIC BUILDINGS
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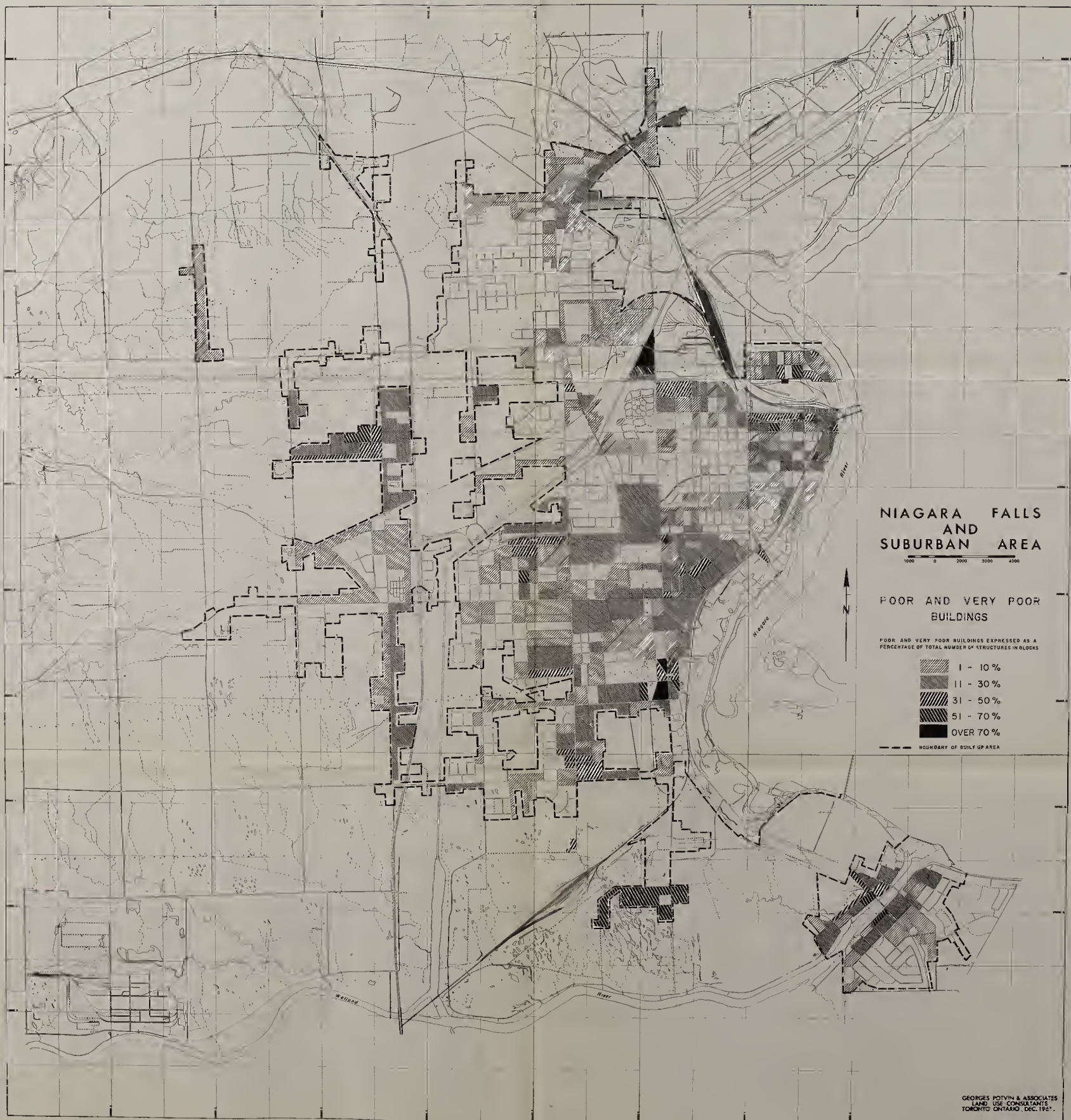
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POOR AND VERY POOR BUILDINGS
POOR AND VERY POOR BUILDINGS EXPRESSED AS A PERCENTAGE OF TOTAL NUMBER OF STRUCTURES IN BLOCKS
1 - 10 %
11 - 30 %
31 - 50 %
51 - 70 %
OVER 70 %
BOUNDARY OF BUILT UP AREA
Welland River
GEORGES POTVIN & ASSOCIATES
LAND USE CONSULTANTS
TORONTO ONTARIO DEC. 19[illegible].

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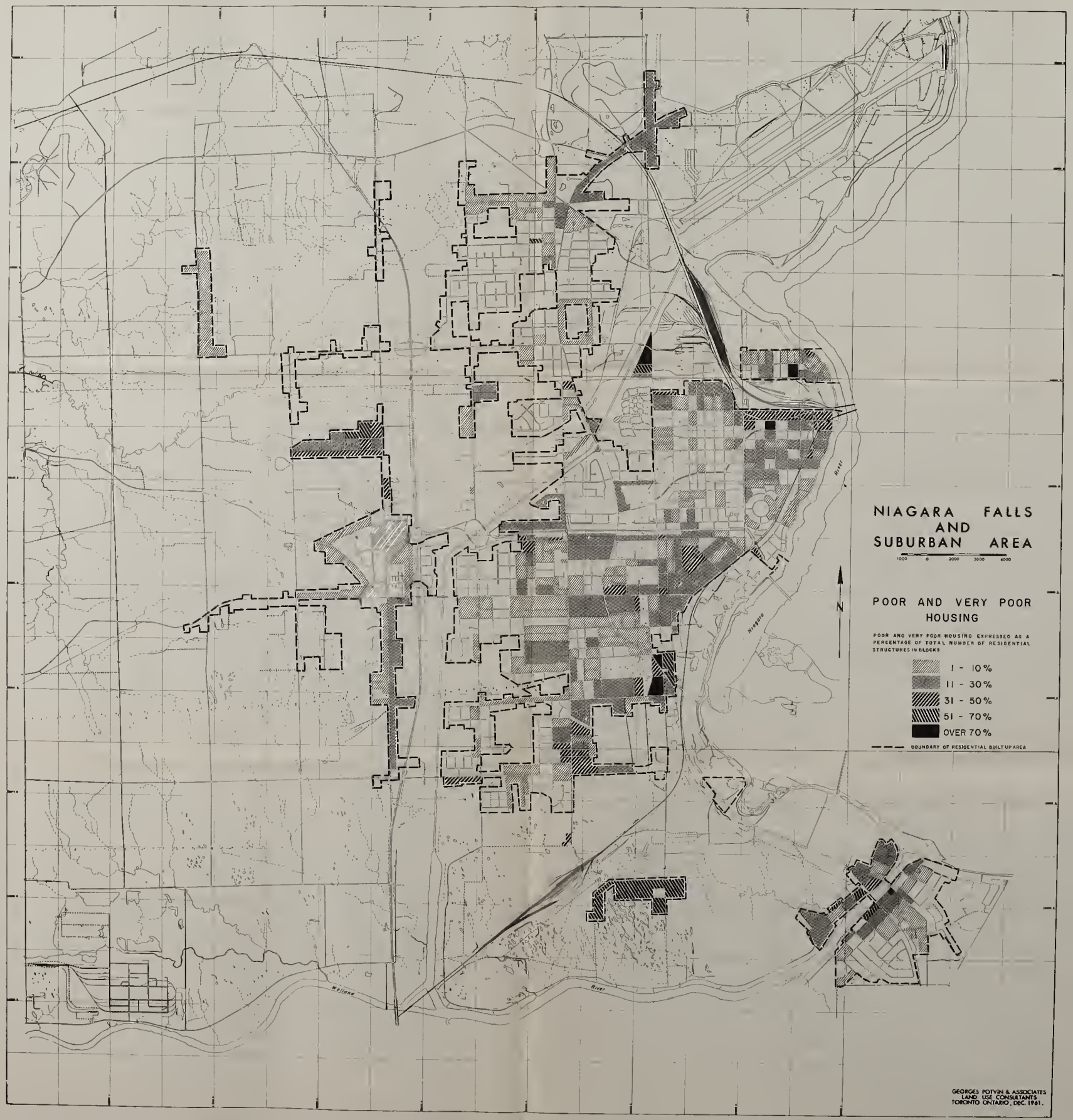
NIAGARA FALLS AND SUBURBAN AREA
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POOR AND VERY POOR HOUSING
POOR AND VERY POOR HOUSING EXPRESSED AS A PERCENTAGE OF TOTAL NUMBER OF RESIDENTIAL STRUCTURES IN BLOCKS
1 - 10%
11 - 30%
31 - 50%
51 - 70%
OVER 70%
BOUNDARY OF RESIDENTIAL BUILT UP AREA
N
Niagara River
Welland River
GEORGES POTVIN & ASSOCIATES
LAND USE CONSULTANTS
TORONTO ONTARIO, DEC. 1961.

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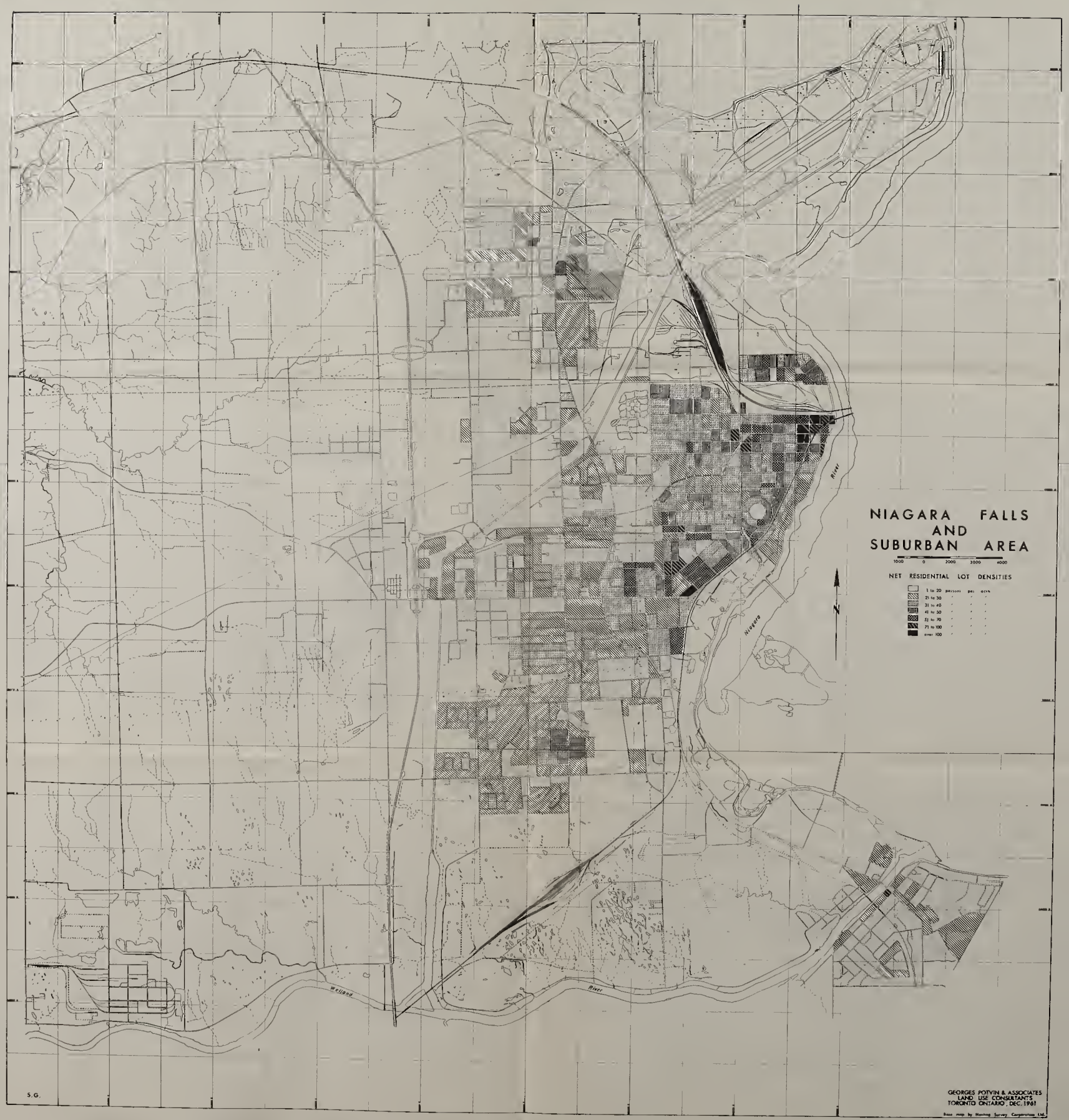
NIAGARA FALLS
AND
SUBURBAN AREA
1000 0 2000 3000 4000
NET RESIDENTIAL LOT DENSITIES
1 to 20 persons per acre
21 to 30 " " "
31 to 40 " " "
41 to 50 " " "
51 to 70 " " "
71 to 100 " " "
over 100 " " "
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Niagara River
Welland River
S.G.
GEORGES POTVIN & ASSOCIATES
LAND USE CONSULTANTS
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